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TECHNICAL REPORT CERC-88-8

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# ANNUAL DATA SUMMARY FOR 1986 CERC FIELD RESEARCH FACILITY

AD-A199 156

Volume II  
APPENDIX B

by

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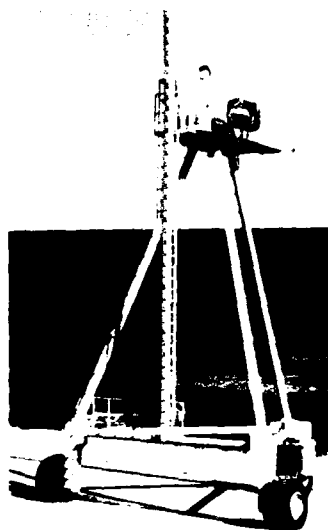
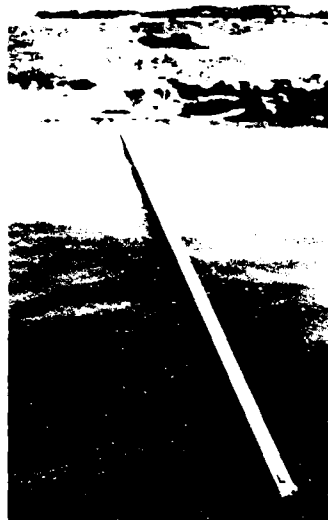
DEPARTMENT OF THE ARMY  
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## APPENDIX B: WAVE DATA

1. Wave data summaries for 1986 and summaries for all years from 1980 through 1986 are presented in this appendix. An explanation of the summary formats is followed by the data for Gages 625, 630, 640, and 645. Wave data are summarized in the forms indicated in the following paragraphs.

### Gage Histories

2. Table B1 includes information about the gages, gage installations, and major interruptions in the data collection. Short interruptions in the operational status of the gage are not mentioned.

### Daily $H_{mo}$ and $T_p$

3. A continuous display of individual wave height and peak spectral wave period values are plotted as a function of the time throughout the year (Figures B1, B9, B16, and B23). Annual mean values are included (curve connects monthly mean values).

### Distributions of Wave Height Versus Peak Period

4. Annual and monthly joint distributions tables are presented for 1986 in Tables B2 and B3, B8 and B9, B14 and B15, and B20 and B21; and data for 1980 through 1986 are in Tables B4 and B5, B10 and B11, B16 and B17, and B22 and B23. Each table gives the frequency (in parts per 10,000) for which the wave height and peak period were within the specified intervals; these values can be converted to percent by dividing by 100. Marginal totals are also included. The row total gives the total number of observations out of 10,000 which fell within each specified peak period interval. The column total gives the number of observations out of 10,000 which fell within each specified wave height interval.

### Cumulative Distributions of Wave Height

5. For each gage, annual and monthly wave height distributions for 1986

are plotted in cumulative form in Figures B2 and B3, B10 and B11, B17 and B18, and B24 and B25. Data for 1980 through 1986 are in Figures B4, B12, B19, and B26.

#### Peak Spectral Wave Period Distributions

6. Annual and monthly peak wave period  $T_p$  distribution histograms for 1986 are presented in Figures B5 and B6, B13 and B14, B20 and B21, and B27 and B28; data for 1980 through 1986 are in Figures B7, B15, B22, and B29.

#### Persistence of Wave Heights

7. Tables B6, B12, B18 and B24 show the number of times throughout 1986 when the specified wave height was equaled or exceeded at least once during each day for the duration (consecutive days) indicated; data for 1980 through 1986 are in Tables B7, B13, B19, and B25. For example, Table B12 for Gage 630 (located 6 km from shore) indicates wave heights equaled or exceeded 1.0 m 50 times for at least 1 day; 34 times for at least 2 days; 24 times for at least 3 days; 21 times for at least 4 days, etc. Therefore, on 16 occasions, the height equaled or exceeded 1.0 m for 1 day exactly ( $50 - 34 = 16$ ); on 10 occasions for 2 days; on 3 occasions 3 days, etc. Note that the height exceeded 1 m 50 times for 1 day or longer, while heights exceeded 0.5 m only 18 times for this same duration. This change in durations occurred because the longer durations of lower waves may be interspersed with shorter, but more frequent, intervals of higher waves. For example, 1 of the times that the wave heights exceeded 0.5 m for 16 days may have represented 3 times the height exceeded 1 m for shorter durations.

#### Spectra

8. Monthly spectra for the offshore Waverider buoy (Gage 630) are presented in Figure B8. The plots show "relative" energy density as a function of wave frequency. These figures summarize the large number of spectra for each month. The figures emphasize the higher energy density associated with storms as well as the general shifts in energy density to different frequencies. As used here, "relative" indicates the spectra have been smoothed by

the 3-D surface drawing routine. Consequently, extremely high- and low-energy density values are modified to produce a smooth surface. The figures are not intended for quantitative measurements; however, they do provide the energy density as a function of frequency relative to the other spectra for the month.

Table B1  
Wave Gage Histories for 1986

Type of Gage	Location	Beginning of Proper Operation	End of Proper Operation	Explanation	Range m	Depth m	Distance from Shore
Continuous wire	Pier sta 19+00 (579 m ENE of baseline)	Nov 78 13 Sep	Pier-End Staff (Gage 625) 5 Jun --	bottom support failed	-7 to 7	8	475 m
Accelerometer buoy	6 km ENE of baseline	Nov 78 After 31 Dec 86	Offshore Buoy (Gage 630) 14 Dec	Removed by trawler	Continuous	18	5.9 km
Accelerometer buoy	1 km ENE of baseline	Oct 84	Nearshore Buoy (Gage 640) --		Continuous	9	0.9 km
Continuous wire	Pier sta 7+80 (238 m ENE of baseline)	Nov 84	Nearshore Staff (Gage 645) --		-2.5 to 7.0	3.5	135 m

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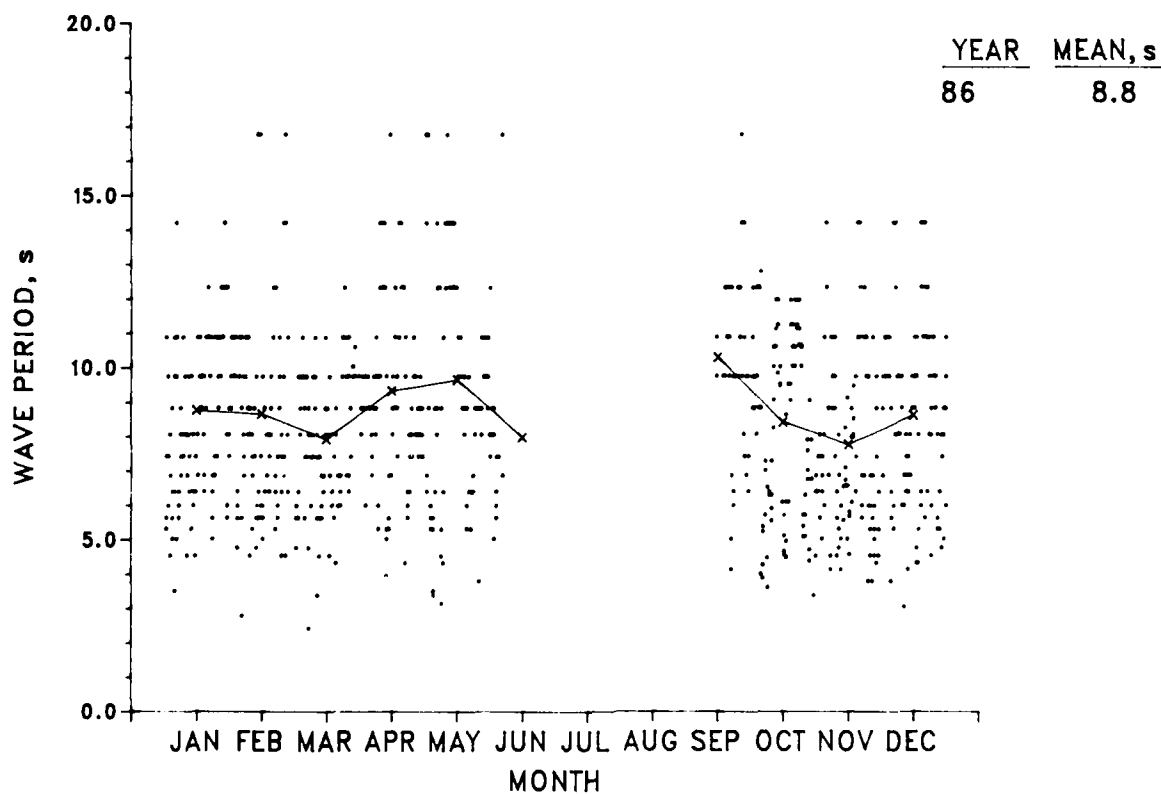
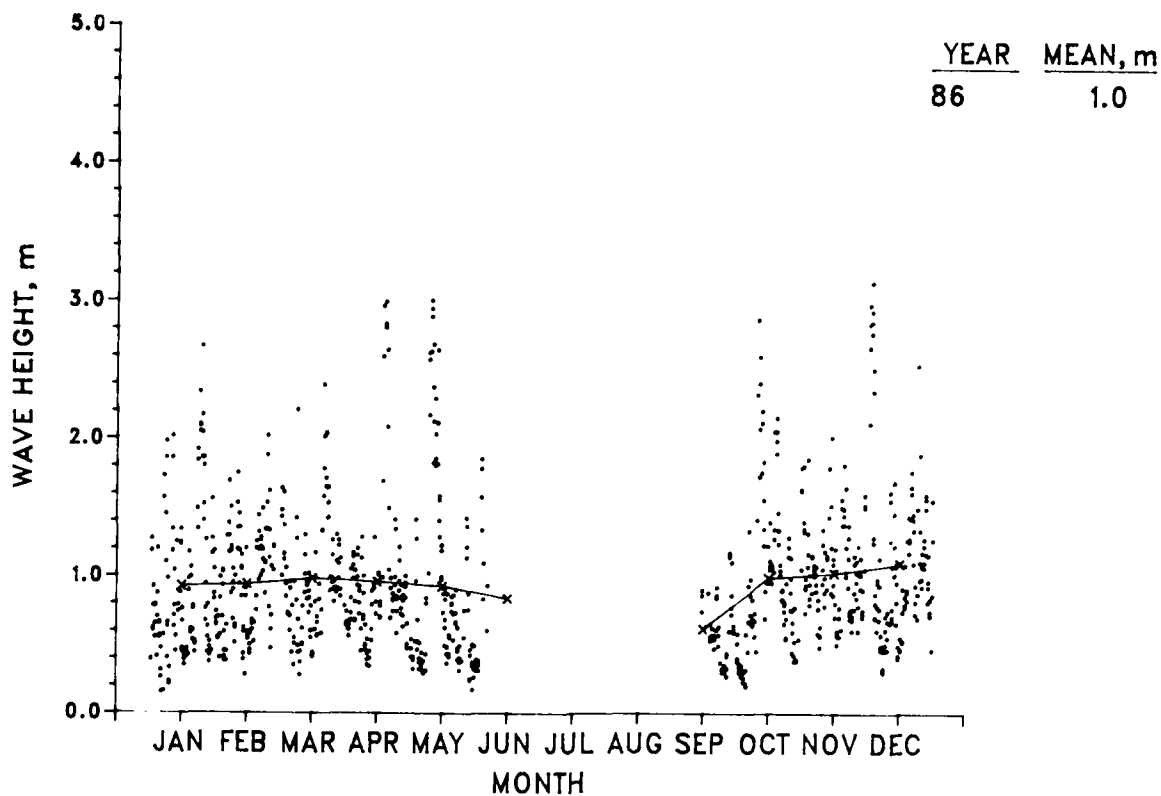


Figure B1. 1986 daily  $H_{mo}$  and  $T_p$  for Gage 625

Table B2  
1986 Annual Joint Distribution of  
 $H_{mo}$  versus  $T_p$  for Gage 625

HEIGHT(METERS)	ANNUAL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	10	10	41	61	61	572	388	215	143	276	10	1787
0.50 - 0.99	20	112	215	552	572	296	930	878	623	82	255	.	4535
1.00 - 1.49	.	20	225	511	306	174	409	184	398	51	112	.	2390
1.50 - 1.99	.	.	.	102	235	61	41	72	72	41	61	.	685
2.00 - 2.49	.	.	.	10	112	31	10	20	72	41	31	.	327
2.50 - 2.99	.	.	.	.	10	10	41	31	72	72	20	.	256
3.00 - 3.49	.	.	.	.	.	.	.	10	.	.	10	.	20
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	20	142	450	1216	1296	633	2003	1583	1452	430	765	10	

Table B3  
1986 Monthly Joint Distribution of  
 $H_{mo}$  versus  $T_p$  for Gage 625

HEIGHT(METERS)	MONTH JAN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	82	.	82	410	820	656	328	82	82	2542
0.50 - 0.99	.	82	164	328	738	246	656	574	902	.	328	.	4018
1.00 - 1.49	.	.	82	574	164	328	410	.	246	.	.	.	1804
1.50 - 1.99	.	.	.	164	328	82	246	82	82	.	.	.	984
2.00 - 2.49	.	.	.	.	246	164	.	.	164	.	.	.	574
2.50 - 2.99	.	.	.	.	.	.	.	.	82	.	.	.	82
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	82	246	1148	1476	902	1722	1476	2132	328	410	82	

(Continued)

(Sheet 1 of 4)

Table B3 (Continued)

HEIGHT(METERS)	MONTH FEB PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	.	.	.	273	.	455	91	273	.	1092
0.50 - 0.99	91	.	.	636	455	273	1273	636	545	182	182	.	4273
1.00 - 1.49	.	.	455	636	545	455	727	364	636	.	91	.	3909
1.50 - 1.99	.	.	.	91	182	91	91	182	.	.	.	.	637
2.00 - 2.49	.	.	.	.	.	.	91	.	.	.	.	.	91
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	91	0	455	1363	1182	819	2455	1182	1636	273	546	0	0

HEIGHT(METERS)	MONTH MAR PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49						94	566	283	94	.	.	.	1037
0.50 - 0.99	94	94	283	755	755	472	1226	943	660	.	94	.	5376
1.00 - 1.49	.	.	189	377	283	189	566	377	377	.	.	.	2358
1.50 - 1.99	.	.	.	189	377	.	.	189	.	.	.	.	755
2.00 - 2.49	.	.	.	94	283	94	.	.	.	.	.	.	471
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	94	94	472	1415	1698	849	2358	1792	1131	0	94	0	0

HEIGHT(METERS)	MONTH APR PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	.	.	.	88	.	177	.	354	354	.	973	
0.50 - 0.99	.	88	88	619	265	442	2478	1681	354	88	354	.	6457	
1.00 - 1.49	.	.	.	177	265	.	796	177	177	.	177	.	1769	
1.50 - 1.99	.	.	.	.	.	88	.	.	.	.	.	.	88	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	88	.	88	
2.50 - 2.99	.	.	.	.	.	.	88	88	88	354	.	.	618	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	88	88	796	530	618	3362	2123	619	796	973	0		

(Sheet 2 of 4)



Table B3 (Continued)

HEIGHT(METERS)	MONTH MAY PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	86	.	86	431	86	1838	690	172	172	603	.	3964	
0.50 - 0.99	.	259	.	86	603	517	.	431	690	431	.	259	3276	
1.00 - 1.49	.	.	86	172	.	.	259	.	86	.	345	.	948	
1.50 - 1.99	.	.	.	.	.	.	.	.	.	172	345	.	517	
2.00 - 2.49	.	.	.	.	86	.	.	.	.	345	172	.	603	
2.50 - 2.99	.	.	.	.	.	.	.	.	172	259	172	.	603	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	86	.	86	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	345	172	861	1034	86	2328	1380	861	948	1982	0		

MONTH JUN													
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													
HEIGHT(METERS)	PERIOD(SECONDS)												TOTAL
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	667	.	.	4000	.	.	.	.	.	4667
0.50 - 0.99	.	.	.	.	667	667	.	.	.	.	667	.	2001
1.00 - 1.49	.	.	.	.	.	1333	.	.	.	.	.	.	1333
1.50 - 1.99	.	.	.	1333	667	.	.	.	.	.	.	.	2000
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	0	0	2000	1334	2000	4000	0	0	0	667	0	

HEIGHT(METERS)	MONTH SEP PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	.	.	.	.	.	870	870	435	1087	.	3262	
0.50 - 0.99	.	.	217	435	652	217	.	1957	652	217	1522	.	5869	
1.00 - 1.49	.	.	.	.	217	217	217	.	217	.	.	.	868	
1.50 - 1.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	0	217	435	869	434	217	2827	1739	652	2609	0		

(Sheet 3 of 4)

Table B3 (Concluded)

HEIGHT(METERS)	MONTH OCT PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	89	89	89	179	625	446	89	.	536	.	2142	
0.50 - 0.99	.	268	357	268	804	446	89	268	1161	.	89	.	3750	
1.00 - 1.49	.	.	446	714	89	.	.	357	804	.	.	.	2410	
1.50 - 1.99	.	.	.	.	268	.	.	89	446	.	.	.	803	
2.00 - 2.49	.	.	.	.	179	.	.	179	357	.	.	.	715	
2.50 - 2.99	.	.	.	.	.	89	89	.	.	.	.	.	178	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	268	892	1071	1429	714	803	1339	2857	0	625	0		

HEIGHT(METERS)	MONTH NOV PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	.	.	.	.	86	.	.	.	.	.	86	
0.50 - 0.99	.	.	431	690	603	259	1034	948	690	86	86	.	4827	
1.00 - 1.49	.	172	517	1121	690	259	345	172	431	172	172	.	4051	
1.50 - 1.99	.	.	.	86	517	172	.	.	.	86	86	.	947	
2.00 - 2.49	.	.	.	.	86	.	.	.	.	.	.	.	86	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	172	948	1897	1896	690	1465	1120	1121	344	344	0		

HEIGHT(METERS)	MONTH DEC PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	.	.	.	.	732	488	.	81	81	.	1382	
0.50 - 0.99	.	163	325	650	407	244	813	976	325	244	81	.	4228	
1.00 - 1.49	.	.	163	569	488	.	325	163	569	244	163	.	2684	
1.50 - 1.99	.	.	.	163	244	81	.	81	81	81	81	.	812	
2.00 - 2.49	.	.	.	.	81	.	.	.	81	.	.	.	162	
2.50 - 2.99	.	.	.	.	81	.	163	163	244	.	.	.	651	
3.00 - 3.49	.	.	.	.	.	.	.	81	.	.	.	.	81	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	163	488	1382	1301	325	2033	1952	1300	650	406	0		

(Sheet 4 of 4)

Table B4  
1980 Through 1986 Annual Joint Distribution of  
 $H_{mo}$  versus  $T_p$  for Gage 625

HEIGHT(METERS)	ANNUAL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	10	23	35	50	106	189	371	388	403	209	233	18	2035	
0.50 - 0.99	6	75	239	393	502	425	632	733	971	220	304	39	4539	
1.00 - 1.49	.	4	81	301	397	249	200	179	424	51	169	4	2059	
1.50 - 1.99	.	.	2	67	200	125	54	63	134	52	94	7	798	
2.00 - 2.49	.	.	.	2	39	44	23	38	74	50	58	2	330	
2.50 - 2.99	.	.	.	.	5	14	25	27	44	26	42	2	185	
3.00 - 3.49	.	.	.	.	.	.	4	5	14	8	12	.	43	
3.50 - 3.99	.	.	.	.	.	.	.	.	4	1	4	.	9	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	16	102	357	813	1249	1046	1309	1433	2068	617	916	72		

Table B5  
1980 Through 1986 Monthly Joint Distribution of  
H<sub>mo</sub> versus T<sub>p</sub> for Gage 625

HEIGHT(METERS)	MONTH JAN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	14	42	71	57	113	127	312	326	354	127	99	14	1656
0.50 - 0.99	.	142	283	397	467	255	453	382	878	170	340	14	3781
1.00 - 1.49	.	.	71	496	708	255	227	127	467	.	85	.	2436
1.50 - 1.99	.	.	.	71	283	297	85	142	212	28	42	.	1160
2.00 - 2.49	.	.	.	.	85	156	14	57	198	71	113	.	694
2.50 - 2.99	.	.	.	.	14	14	42	28	57	42	42	.	239
3.00 - 3.49	.	.	.	.	.	.	.	14	.	.	.	.	14
3.50 - 3.99	.	.	.	.	.	.	.	.	14	.	.	.	14
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	14	184	425	1021	1670	1104	1133	1076	2180	438	721	28	

HEIGHT(METERS)	MONTH FEB PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	.	14	28	43	114	142	271	114	142	.	868	
0.50 - 0.99	14	43	85	299	385	342	684	655	1296	85	285	14	4187	
1.00 - 1.49	.	.	128	328	456	299	271	228	769	85	214	.	2778	
1.50 - 1.99	.	.	.	142	299	128	71	128	228	128	128	.	1252	
2.00 - 2.49	.	.	.	.	14	57	43	57	85	100	128	.	484	
2.50 - 2.99	.	.	.	.	.	.	28	28	114	28	142	.	340	
3.00 - 3.49	.	.	.	.	.	.	.	.	57	.	14	.	71	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	14	.	14	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	14	43	213	783	1182	869	1211	1238	2820	540	1067	14		

HEIGHT(METERS)	MONTH MAR PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	13	.	.	26	40	40	251	185	224	145	158	.	1082	
0.50 - 0.99	13	66	237	475	528	449	726	554	923	172	369	.	4512	
1.00 - 1.49	.	.	106	290	343	317	224	237	646	53	475	.	2691	
1.50 - 1.99	.	.	.	92	172	106	79	92	198	79	185	13	1016	
2.00 - 2.49	.	.	.	13	66	40	40	.	66	92	53	.	370	
2.50 - 2.99	.	.	.	.	.	13	40	.	79	66	26	.	224	
3.00 - 3.49	.	.	.	.	.	.	26	.	40	26	13	.	105	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	26	66	343	896	1149	965	1386	1068	2176	633	1279	13		

(Continued)

(Sheet 1 of 4)

Table B5 (Continued)

HEIGHT(METERS)	MONTH APR PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	29	14	14	14	72	86	473	287	330	258	316	.	1893	
0.50 - 0.99	.	43	143	244	201	416	890	961	1535	316	459	14	5222	
1.00 - 1.49	.	.	86	201	330	287	201	172	473	57	201	.	2008	
1.50 - 1.99	.	.	.	29	86	57	43	86	143	14	100	.	558	
2.00 - 2.49	.	.	.	14	14	.	14	14	86	.	14	.	156	
2.50 - 2.99	.	.	.	.	.	29	14	29	14	57	.	.	143	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	14	.	14	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	29	57	243	502	703	875	1635	1549	2581	702	1104	14		

HEIGHT(METERS)	MONTH MAY PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	12	37	37	37	250	237	612	462	325	125	237	.	2371	
0.50 - 0.99	.	162	262	487	649	487	1099	1149	861	87	187	12	5442	
1.00 - 1.49	.	.	25	100	187	212	325	175	325	25	137	.	1511	
1.50 - 1.99	.	.	.	62	62	12	50	25	37	25	112	.	385	
2.00 - 2.49	.	.	.	.	25	25	.	12	.	62	37	12	173	
2.50 - 2.99	.	.	.	.	.	.	.	.	37	37	25	.	99	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	12	.	12	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	12	199	324	686	1173	973	2086	1823	1585	361	747	24		

HEIGHT(METERS)	MONTH JUN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	49	97	113	113	356	502	971	534	502	97	65	16	3415	
0.50 - 0.99	16	113	340	469	421	599	922	1230	874	178	65	32	5259	
1.00 - 1.49	.	.	16	129	146	129	194	162	275	.	16	.	1067	
1.50 - 1.99	.	.	.	49	49	49	.	.	65	.	32	.	244	
2.00 - 2.49	.	.	.	.	.	16	.	.	.	.	.	.	16	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	65	210	469	760	972	1295	2087	1926	1716	275	178	48		

(Continued)

(Sheet 2 of 4)

Table B5 (Continued)

MONTH JUL													
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													
HEIGHT(METERS)	PERIOD(SECONDS)												TOTAL
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	56	113	94	188	525	713	1220	994	432	413	38	4786
0.50 - 0.99	.	94	281	338	675	600	525	788	488	356	94	131	4370
1.00 - 1.49	.	.	56	225	225	94	56	56	.	.	19	.	731
1.50 - 1.99	.	.	.	.	38	38	38	.	.	.	.	.	114
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	150	450	657	1126	1257	1332	2064	1482	788	526	169	

HEIGHT(METERS)	MONTH AUG PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	16	16	48	194	452	613	919	677	371	242	16	3564
0.50 - 0.99	32	97	242	468	710	774	887	823	468	210	210	48	4969
1.00 - 1.49	.	.	32	177	274	194	177	32	32	.	.	.	918
1.50 - 1.99	.	.	.	32	145	48	16	16	16	16	32	.	321
2.00 - 2.49	.	.	.	.	16	16	.	32	.	.	81	.	145
2.50 - 2.99	.	.	.	.	.	.	16	16	16	.	.	.	48
3.00 - 3.49	.	.	.	.	.	.	.	16	16	.	.	.	32
3.50 - 3.99	.	.	.	.	.	.	.	.	16	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	32	113	290	725	1339	1484	1709	1822	1257	597	565	64	

HEIGHT(METERS)	MONTH SEP PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	.	15	15	62	108	309	587	294	232	93	1715	
0.50 - 0.99	.	15	216	263	556	325	325	788	1252	216	386	.	4342	
1.00 - 1.49	.	.	46	263	464	309	263	371	665	77	216	.	2674	
1.50 - 1.99	.	.	.	108	232	185	62	93	124	62	46	.	912	
2.00 - 2.49	.	.	.	.	.	31	15	31	15	31	46	.	169	
2.50 - 2.99	.	.	.	.	.	15	15	31	62	.	46	.	169	
3.00 - 3.49	.	.	.	.	.	.	.	.	15	.	.	.	15	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	15	262	649	1267	927	788	1623	2720	690	972	93		

(Continued)

(Sheet 3 of 4)

Table B5 (Concluded)

HEIGHT(METERS)	MONTH OCT PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	25	50	12	149	237	174	274	62	249	25	1257	
0.50 - 0.99	.	75	199	249	423	299	299	423	1208	237	336	50	3798	
1.00 - 1.49	.	.	125	411	386	249	87	212	573	87	237	25	2392	
1.50 - 1.99	.	.	25	87	311	100	50	75	286	87	199	37	1257	
2.00 - 2.49	.	.	.	.	112	87	75	162	162	87	62	12	759	
2.50 - 2.99	.	.	.	.	25	50	62	62	37	25	100	25	386	
3.00 - 3.49	.	.	.	.	.	.	12	.	.	50	50	.	112	
3.50 - 3.99	.	.	.	.	.	.	.	.	25	12	.	.	37	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	75	374	797	1269	934	822	1108	2565	647	1233	174		

HEIGHT(METERS)	MONTH NOV PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	39	104	13	117	78	117	196	248	326	.	1238	
0.50 - 0.99	.	26	339	404	574	404	495	548	730	365	430	39	4354	
1.00 - 1.49	.	39	156	417	665	339	209	183	339	143	156	13	2659	
1.50 - 1.99	.	.	.	39	313	222	104	39	78	130	91	26	1042	
2.00 - 2.49	.	.	.	.	52	26	39	13	65	78	91	.	364	
2.50 - 2.99	.	.	.	.	.	13	39	52	26	39	52	.	221	
3.00 - 3.49	.	.	.	.	.	.	.	13	39	13	26	.	91	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	26	.	26	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	65	534	964	1617	1121	964	965	1473	1016	1198	78		

HEIGHT(METERS)	MONTH DEC PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	27	14	41	55	82	165	316	370	329	329	27	1755	
0.50 - 0.99	.	27	247	604	480	261	302	604	988	274	398	137	4322	
1.00 - 1.49	.	.	96	508	508	247	137	151	357	55	178	.	2237	
1.50 - 1.99	.	.	.	69	343	233	27	41	151	27	96	.	987	
2.00 - 2.49	.	.	.	.	55	55	14	82	137	41	55	.	439	
2.50 - 2.99	.	.	.	.	14	27	27	69	69	.	41	.	247	
3.00 - 3.49	.	.	.	.	.	.	.	14	.	.	.	.	14	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	54	357	1222	1455	905	672	1277	2072	726	1097	164		

(Sheet 4 of 4)

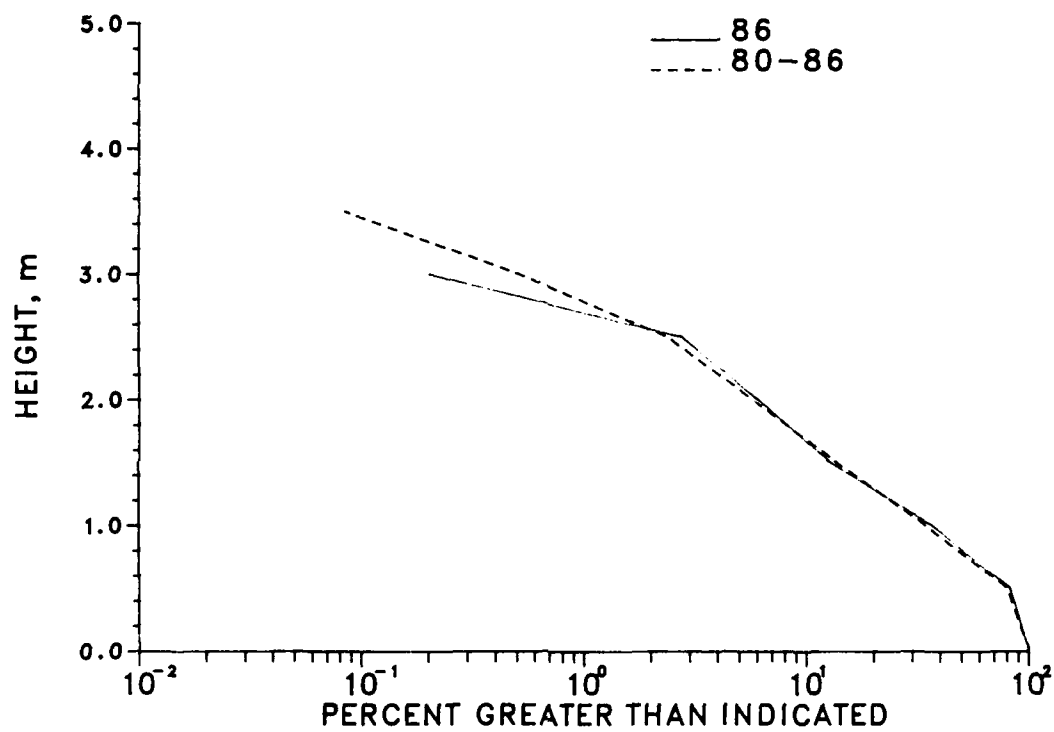


Figure B2. Annual cumulative distributions of  $H_{mo}$  for Gage 625



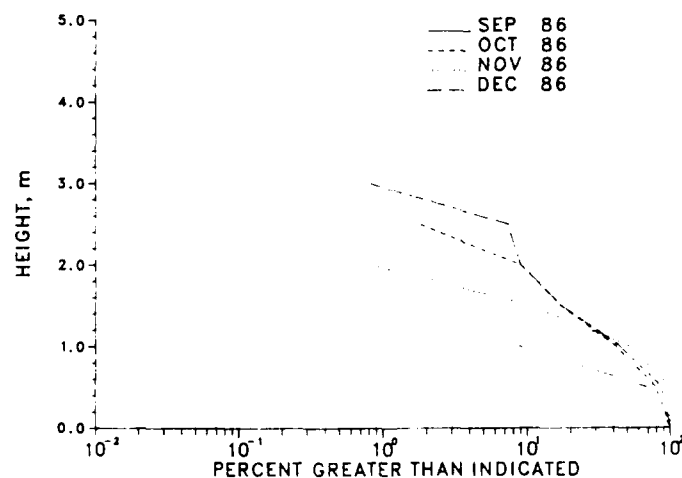
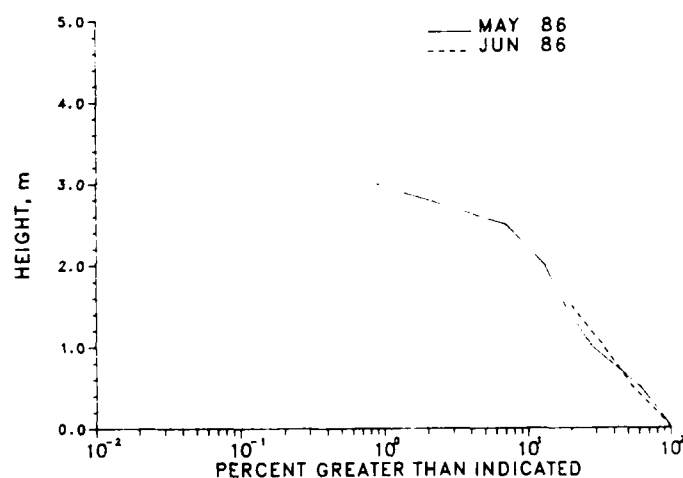
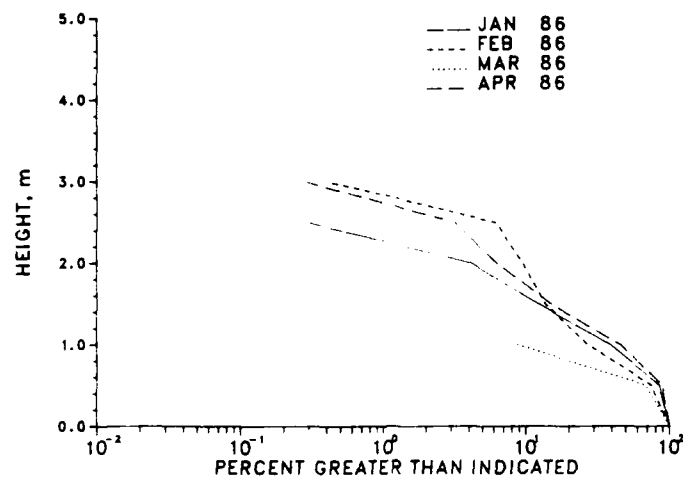


Figure B3. 1986 monthly cumulative distribution of  $H_{mo}$  for Gage 625

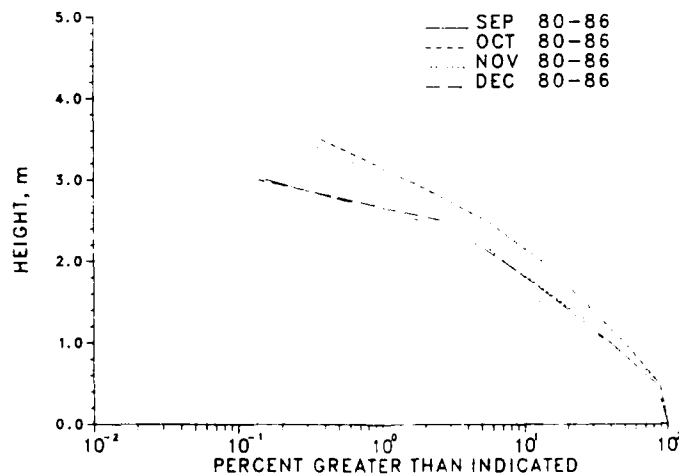
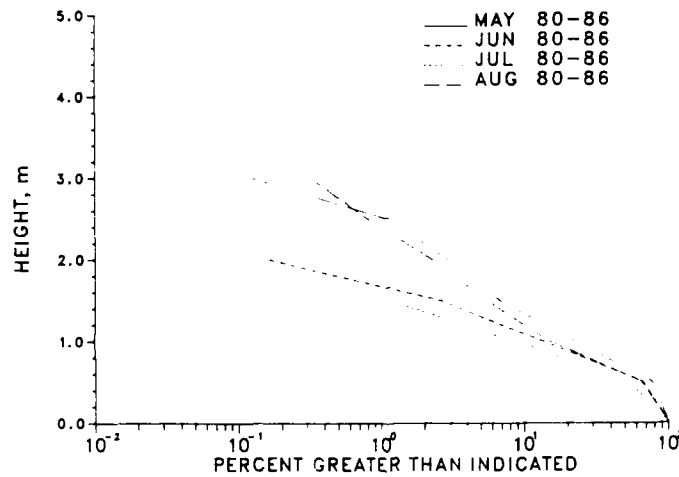
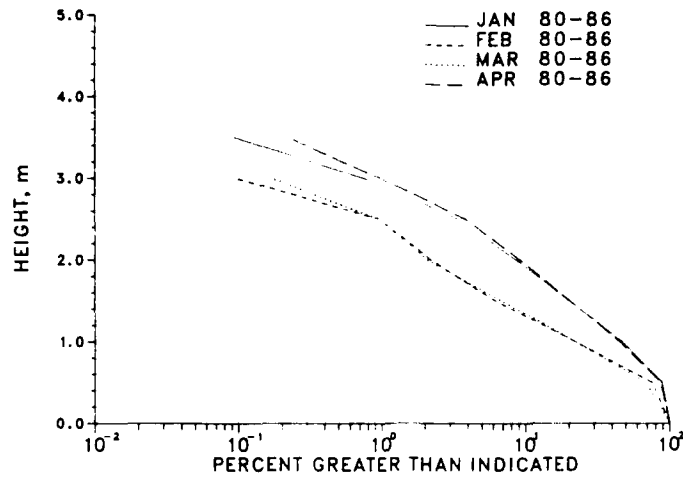


Figure B4. 1980 through 1986 monthly cumulative distribution of  $H_{mo}$  for Gage 625

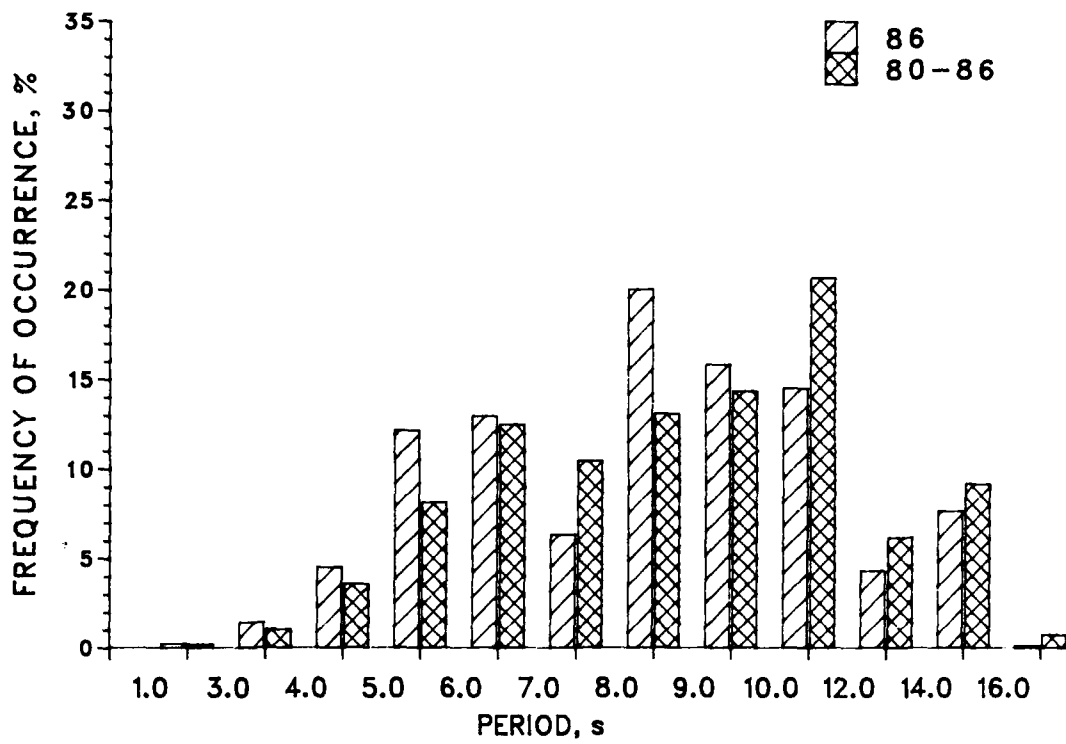


Figure B5. Annual distributions of  $T_p$  for Gage 625

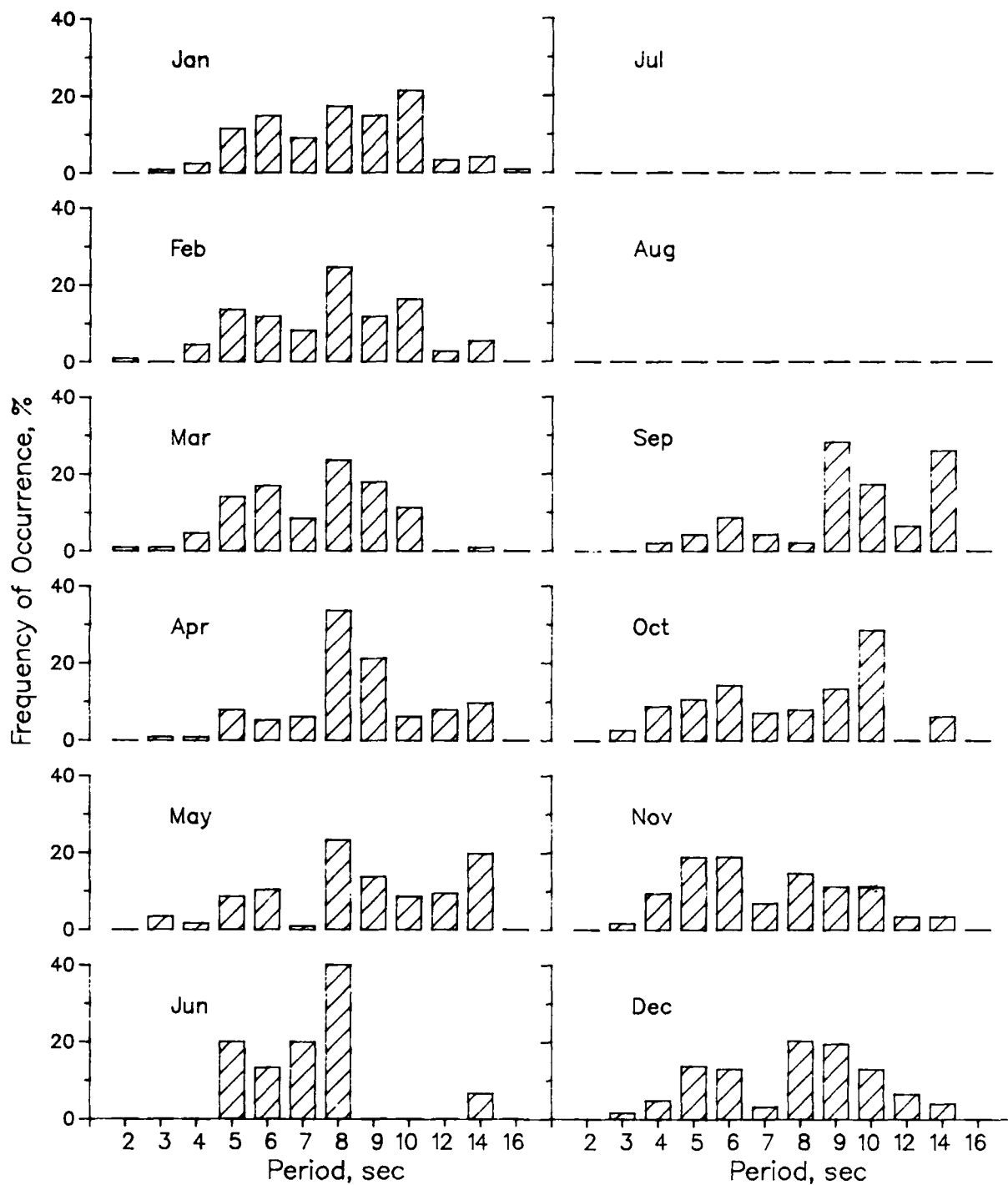


Figure B6. 1986 monthly wave period distributions for Gage 625

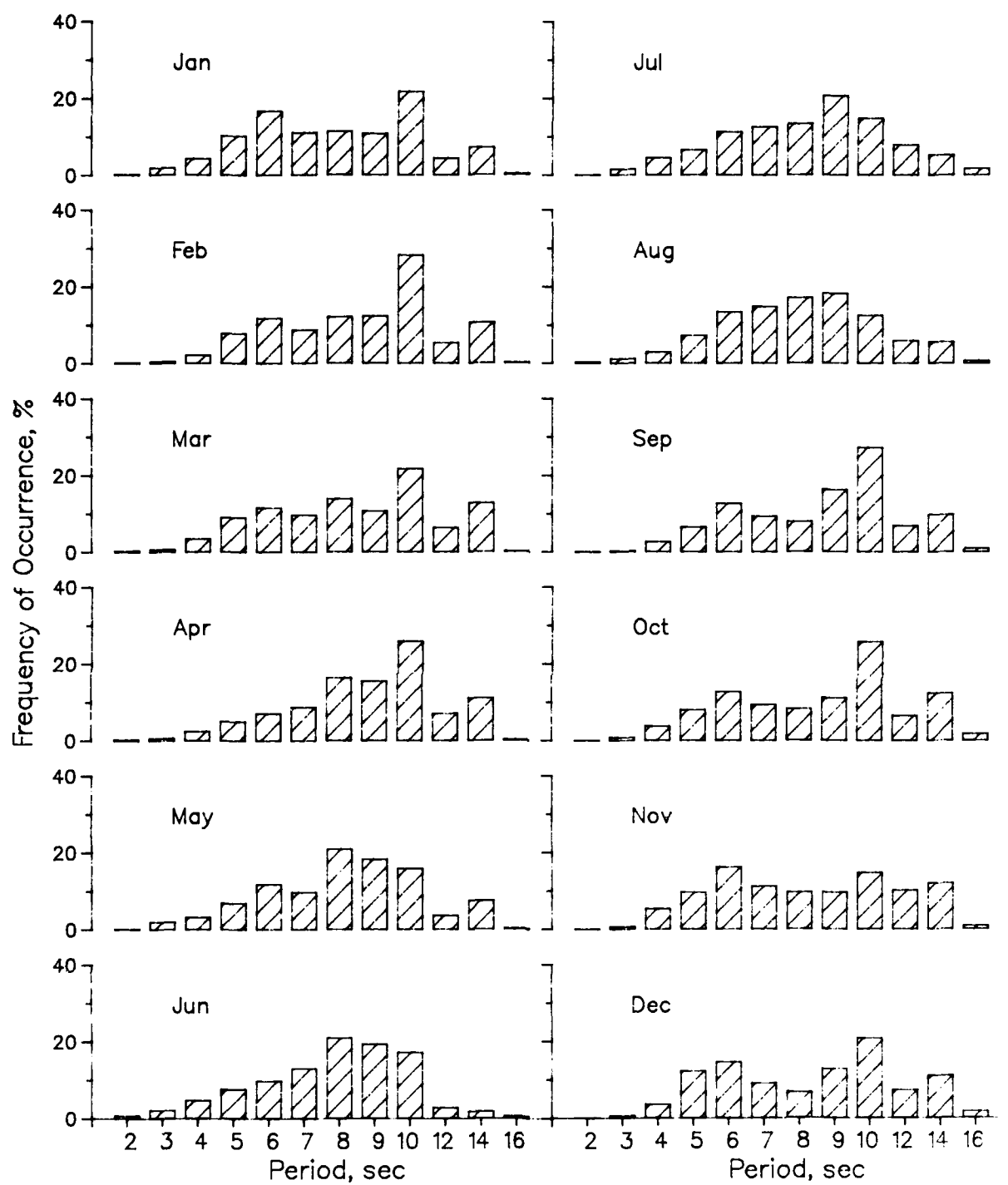


Figure B7. 1980-86 monthly wave period distributions for Gage 625

Table B6  
1986 Persistence of  $H_{mo}$  for Gage 625

Height m	Consecutive Day(s) or Longer																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19+
0.5	23	20	18	15	14	13						8	7			6			4
1.0	49	28	20	17	9	6	5	2	1										
1.5	26	15	7	4		1													
2.0	12	7	4		1														
2.5	7	4	3																
3.0	2																		

Table B7  
1980 Through 1986 Persistence of  $H_{mo}$  for Gage 625

Height m	Consecutive Day(s) or Longer																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19+
0.5	28	23	21	18		15			10			8				6			4
1.0	46	31	23	16	11	9			4										
1.5	30	18	9	6		3													
2.0	15	9	5																
2.5	10	5	2																
3.0	3																		
3.5	2																		

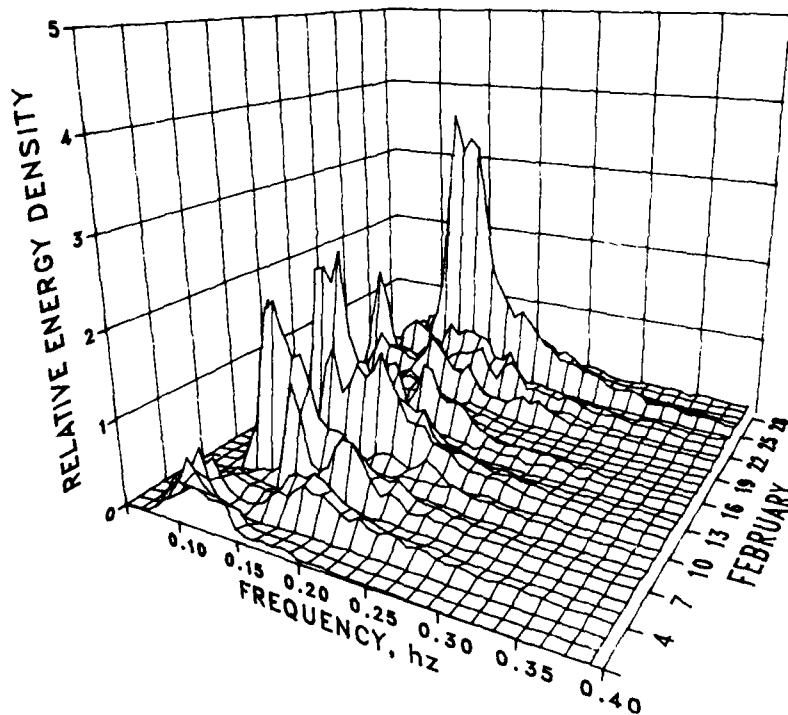
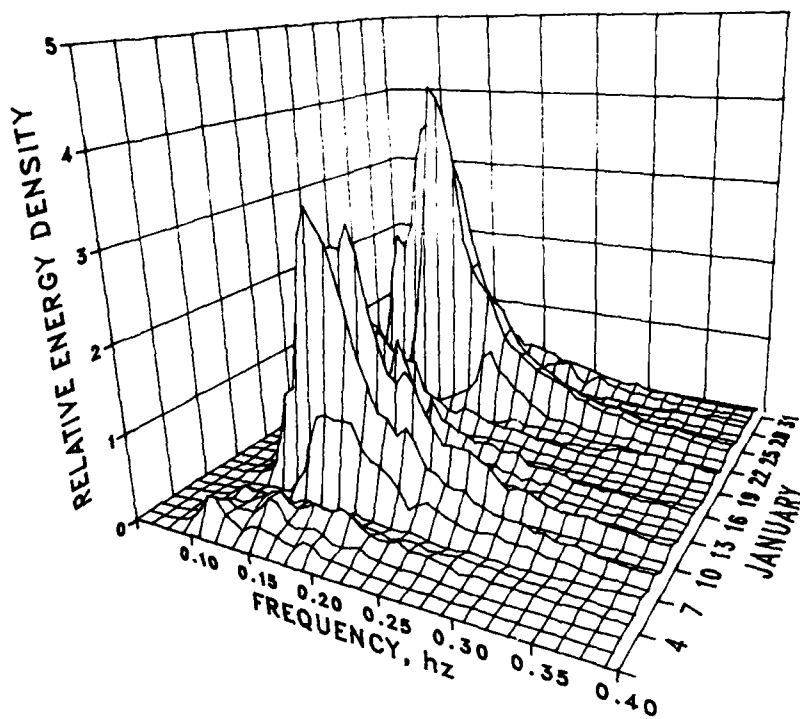


Figure B8. Spectra for Gage 630 (Sheet 1 of 6)

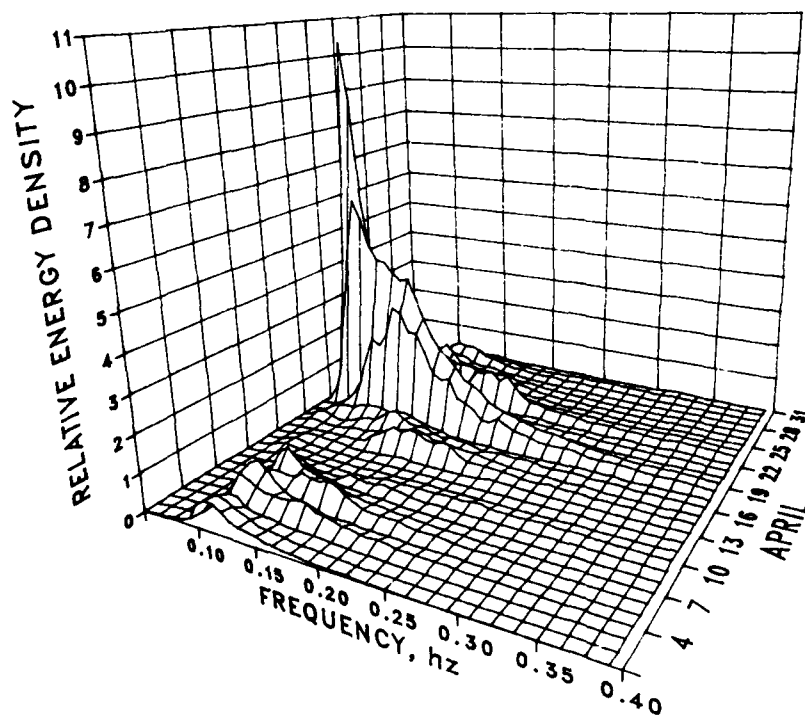
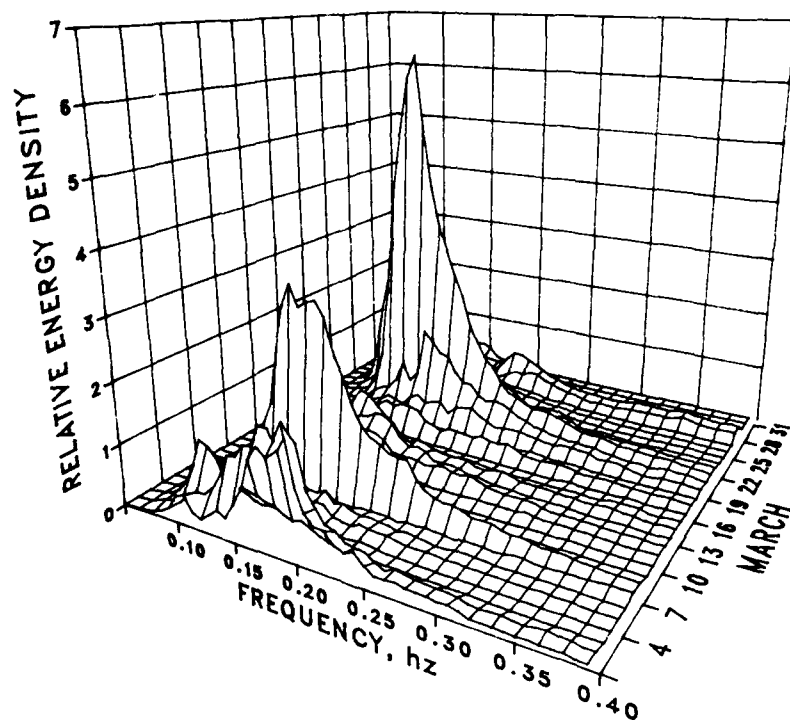


Figure B8. (Sheet 2 of 6)



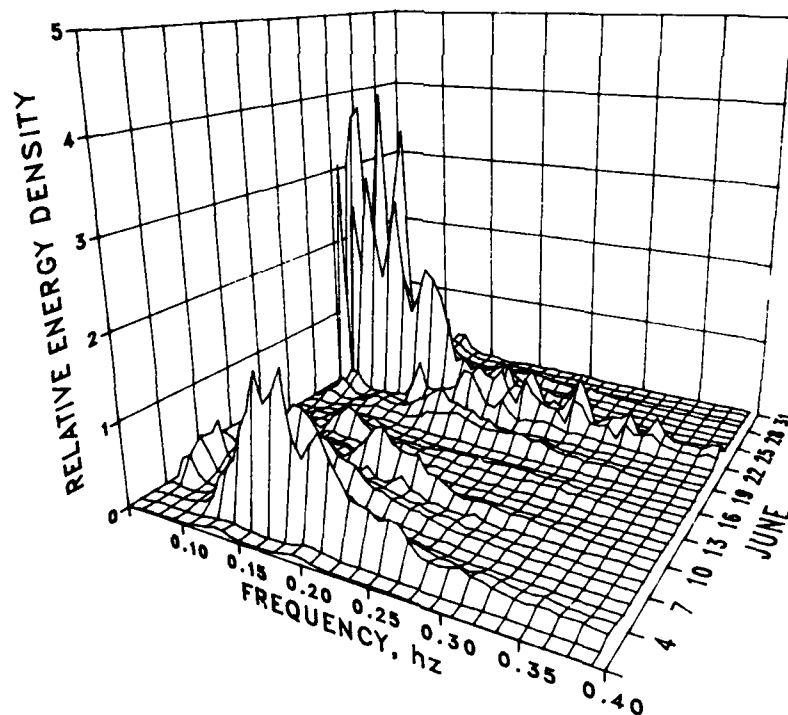
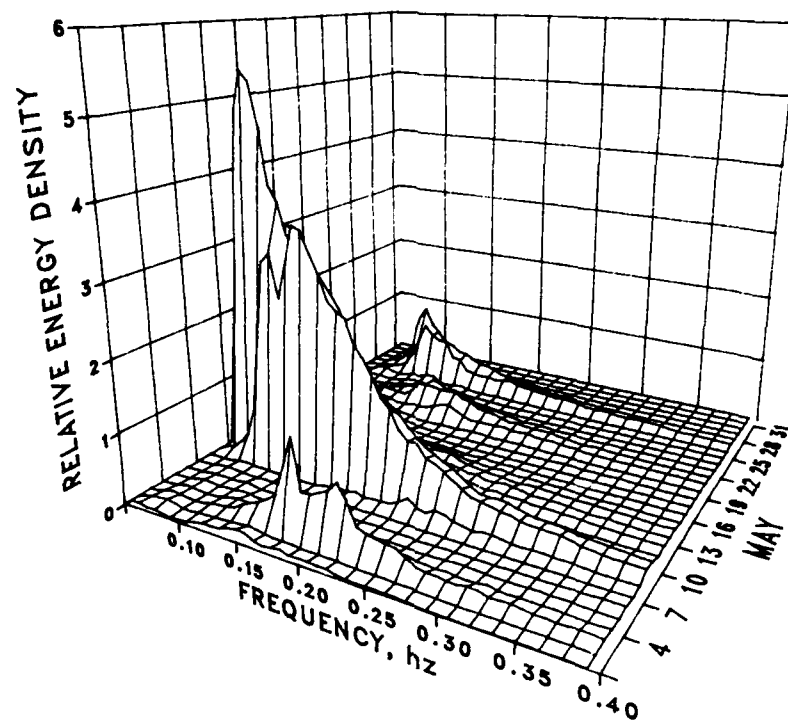


Figure B8. (Sheet 3 of 6)

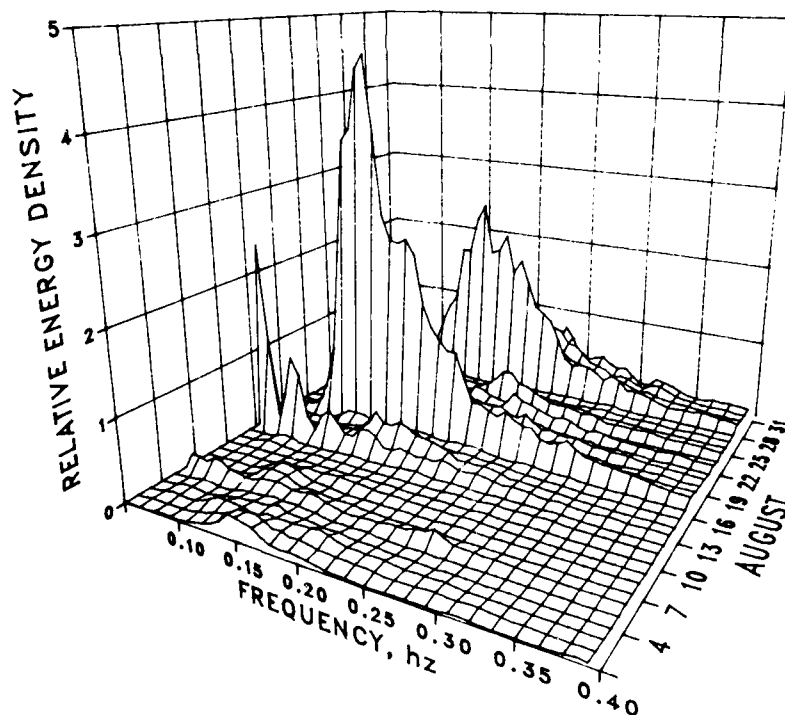
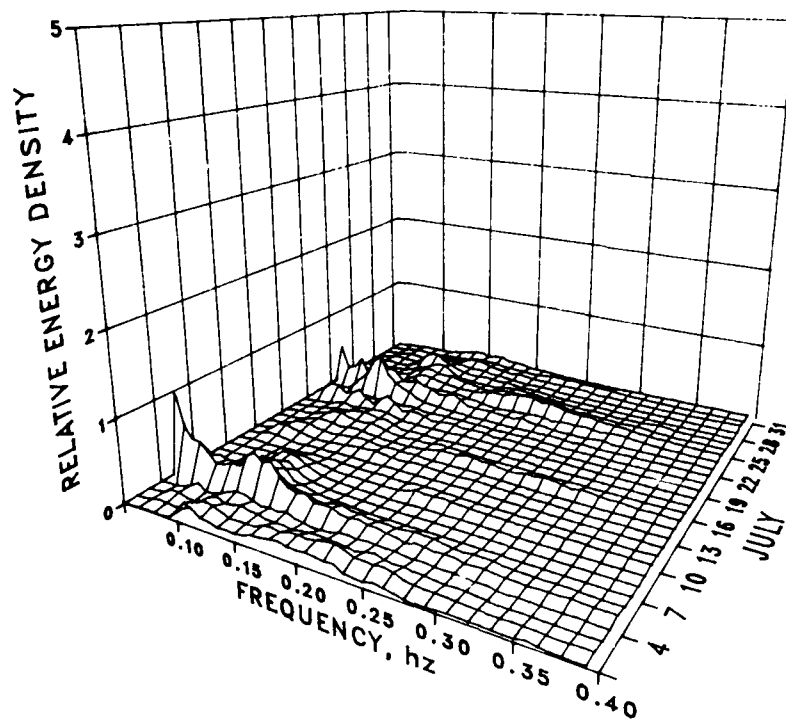


Figure B8. (Sheet 4 of 6)

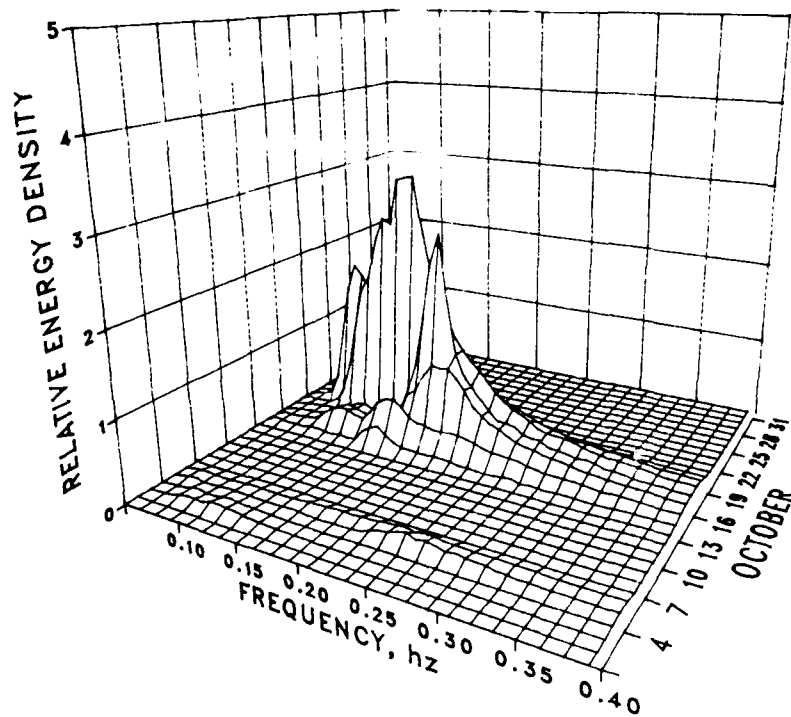
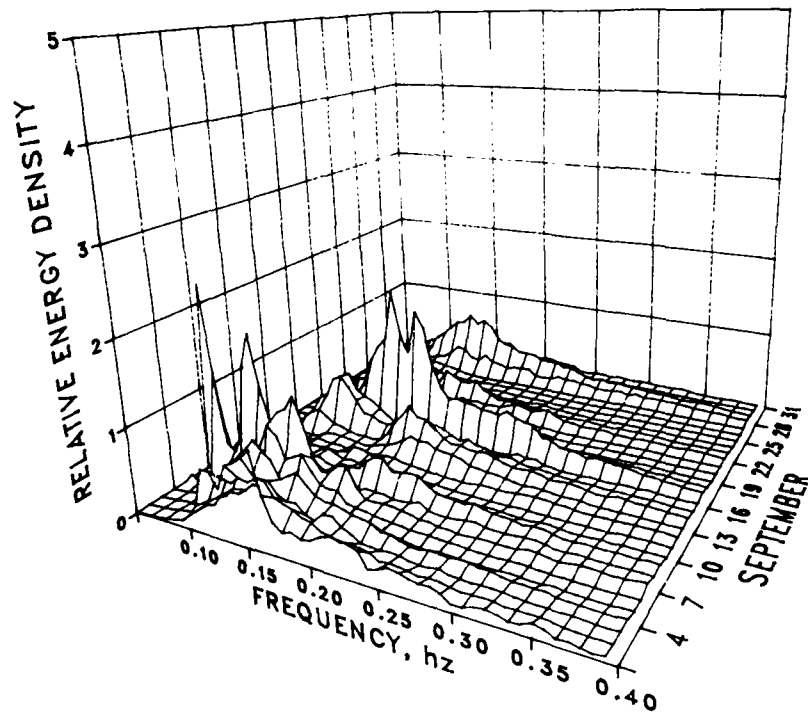


Figure B8. (Sheet 5 of 6)

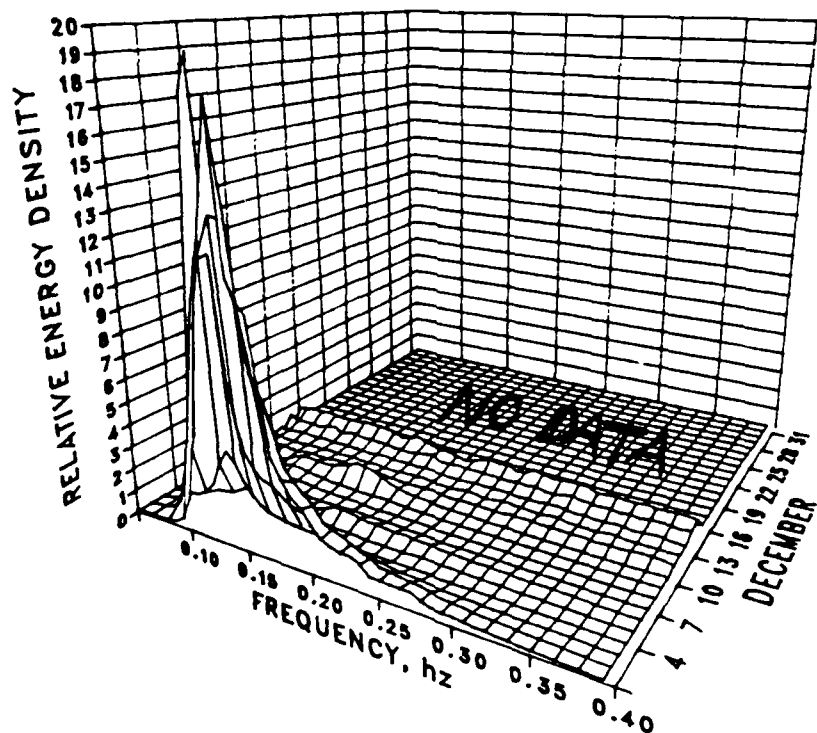
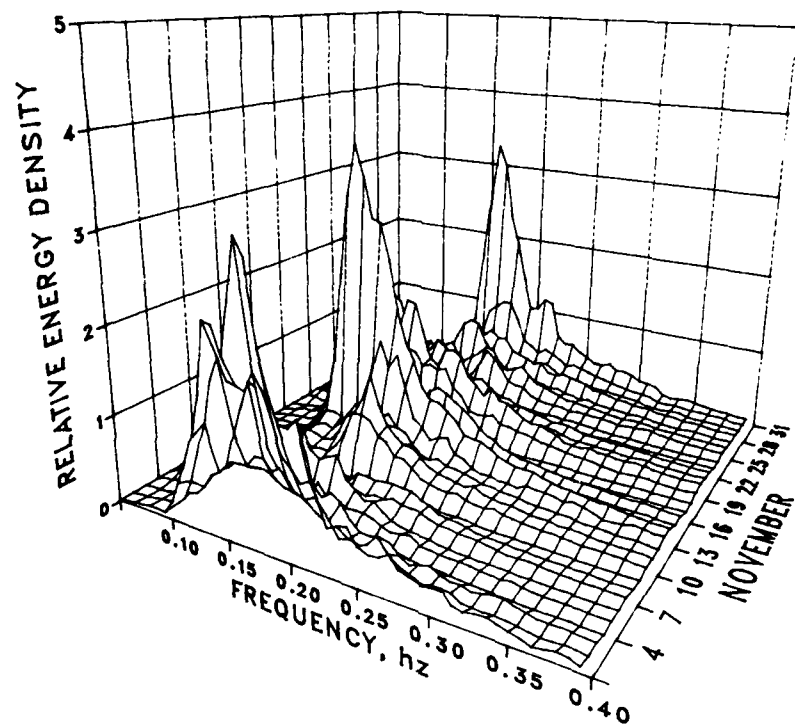


Figure B8. (Sheet 6 of 6)

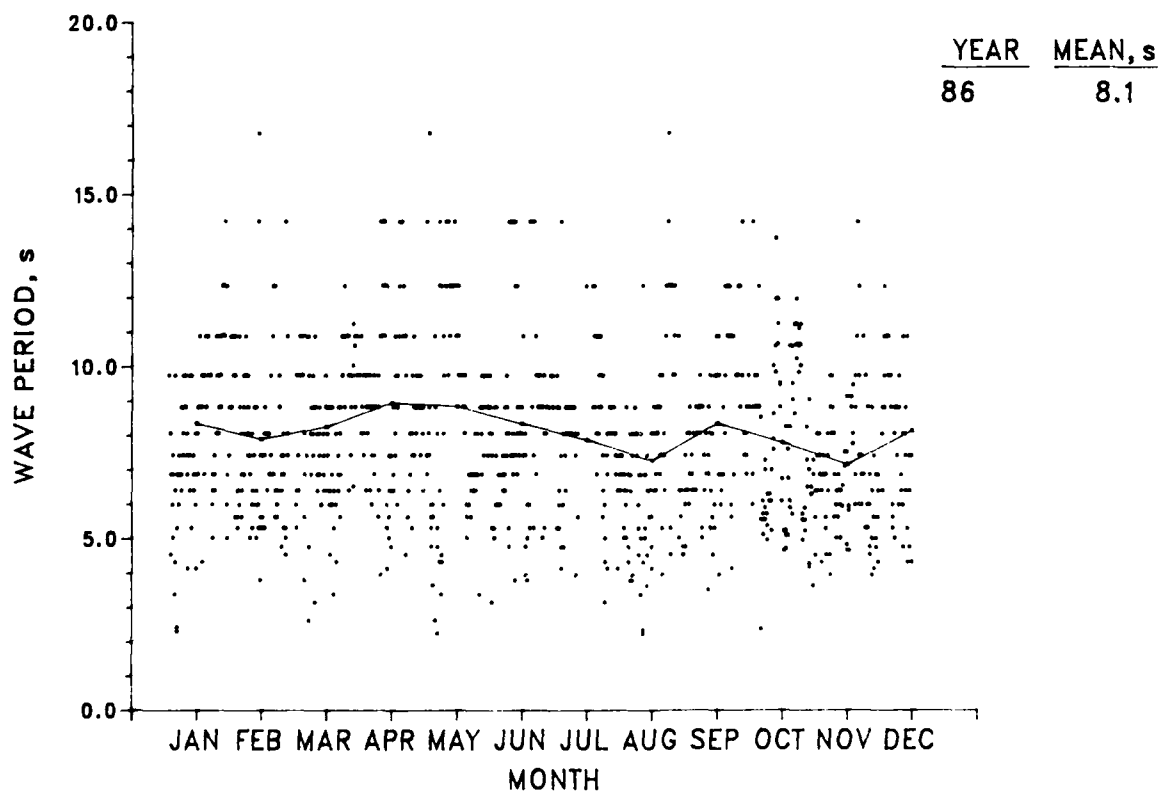
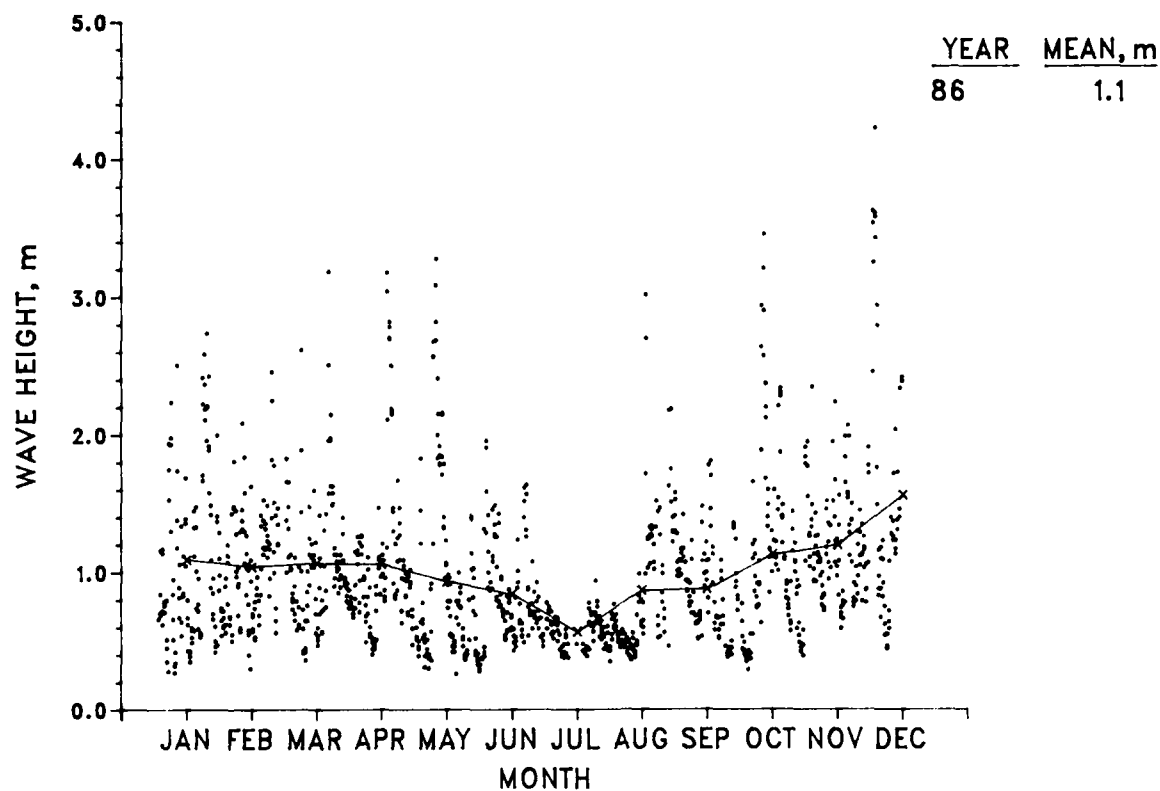


Figure B9. 1986 daily  $H_{mo}$  and  $T_p$  for Gage 630

Table B8  
1986 Annual Joint Distribution of  
H<sub>mo</sub> versus T<sub>p</sub> for Gage 630

HEIGHT(METERS)	ANNUAL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	23	23	46	77	177	100	485	154	77	46	115	.	1323	
0.50 - 0.99	38	154	162	500	569	385	1331	700	462	138	169	.	4608	
1.00 - 1.49	.	23	254	646	531	292	400	254	246	15	85	8	2754	
1.50 - 1.99	.	.	15	200	177	69	85	38	77	15	46	.	722	
2.00 - 2.49	.	.	15	23	100	23	46	15	15	54	15	.	306	
2.50 - 2.99	.	.	.	.	8	38	23	8	46	31	15	.	169	
3.00 - 3.49	.	.	.	.	8	8	38	8	.	8	8	.	78	
3.50 - 3.99	.	.	.	.	.	.	15	8	.	.	8	.	31	
4.00 - 4.49	.	.	.	.	.	.	.	.	8	.	.	.	8	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	61	200	492	1446	1570	915	2423	1185	931	307	461	8		

Table B9  
1986 Monthly Joint Distribution of  
 $H_{mo}$  versus  $T_p$  for Gage 630

MONTH JAN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD														TOTAL
HEIGHT(METERS)	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	87	.	.	.	87	87	435	261	174	.	261	.	1392	
0.50 - 0.99	87	87	261	87	435	435	609	1478	348	87	261	.	4175	
1.00 - 1.49	.	.	174	348	435	261	435	174	261	.	.	87	2175	
1.50 - 1.99	.	.	.	435	174	.	261	174	87	.	.	.	1131	
2.00 - 2.49	.	.	.	87	435	87	261	.	.	.	.	.	870	
2.50 - 2.99	.	.	.	.	87	87	.	.	87	.	.	.	261	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	174	87	435	957	1653	957	2001	2087	957	87	522	87		

MONTH FEB PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD														TOTAL
HEIGHT(METERS)	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	.	.	.	91	.	.	.	91	.	.	182	
0.50 - 0.99	.	91	91	909	545	545	1182	364	818	91	91	.	4727	
1.00 - 1.49	.	.	91	1273	727	364	545	545	273	.	273	.	4091	
1.50 - 1.99	.	.	.	91	273	273	91	.	.	.	.	.	728	
2.00 - 2.49	.	.	.	.	182	.	91	.	.	.	.	.	273	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	91	182	2273	1727	1273	1909	909	1091	182	364	0		

MONTH MAR													
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													
HEIGHT(METERS)	PERIOD(SECONDS)												TOTAL
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	.	84	.	252	84	84	.	.	.	504
0.50 - 0.99	84	252	.	336	420	336	1008	1008	1008	.	.	.	4452
1.00 - 1.49	.	.	252	504	840	252	336	672	672	.	84	.	3612
1.50 - 1.99	.	.	.	252	168	84	336	168	84	.	.	.	1092
2.00 - 2.49	.	.	.	.	84	.	.	.	.	.	.	.	84
2.50 - 2.99	.	.	.	.	.	84	84	.	.	.	.	.	168
3.00 - 3.49	.	.	.	.	84	.	.	.	.	.	.	.	84
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	84	252	252	1092	1680	756	2016	1932	1848	0	84	0	

(Continued)

(Sheet 1 of 4)

Table B9 (Continued)

MONTH APR													
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													
HEIGHT(METERS)	PERIOD(SECONDS)												TOTAL
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	.	.	.	167	.	167	167	167	.	668
0.50 - 0.99	.	83	167	250	417	583	1917	1083	583	167	167	.	5417
1.00 - 1.49	.	.	83	417	750	250	917	167	167	.	167	.	2918
1.50 - 1.99	.	.	.	83	.	.	.	.	.	.	.	.	83
2.00 - 2.49	.	.	.	83	.	.	.	.	.	250	.	.	333
2.50 - 2.99	.	.	.	.	.	.	.	.	83	250	83	.	416
3.00 - 3.49	.	.	.	.	.	.	83	83	.	.	.	.	166
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	83	250	833	1167	833	3084	1333	1000	834	584	0	

MONTH MAY PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD														TOTAL
HEIGHT(METERS)	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	168	168	504	168	1261	420	84	84	252	.	3109	
0.50 - 0.99	168	252	168	756	672	252	588	588	168	84	168	.	3864	
1.00 - 1.49	.	.	84	168	168	.	168	168	84	84	336	.	1260	
1.50 - 1.99	.	.	.	84	.	.	.	.	84	168	420	.	756	
2.00 - 2.49	.	.	.	.	.	.	.	84	.	168	168	.	420	
2.50 - 2.99	.	.	.	.	.	.	84	84	84	84	84	.	420	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	84	84	.	168	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	168	252	420	1176	1344	420	2101	1344	504	756	1512	0		

MONTH JUN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD														TOTAL
HEIGHT(METERS)	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	85	85	256	.	171	256	.	85	85	.	.	1023	
0.50 - 0.99	.	256	.	513	342	598	2908	769	85	855	171	.	6495	
1.00 - 1.49	.	.	85	684	427	342	85	171	85	.	.	.	1879	
1.50 - 1.99	.	.	.	171	85	171	85	.	85	.	.	.	597	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	341	170	1624	854	1282	3332	940	340	940	171	0		

(Continued)

(Sheet 2 of 4)



Table B9 (Continued)

HEIGHT(METERS)	MONTH JUL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	.	108	538	430	1935	.	215	.	323	.	3549	
0.50 - 0.99	.	215	645	753	645	430	3011	430	215	108	.	.	6452	
1.00 - 1.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
1.50 - 1.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	215	645	861	1183	860	4946	430	430	108	323	0		

HEIGHT(METERS)	MONTH AUG PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	88	175	263	351	526	.	614	.	88	.	.	.	2105	
0.50 - 0.99	88	263	351	614	1228	351	702	88	88	88	702	.	4563	
1.00 - 1.49	.	88	526	175	175	439	526	263	88	88	.	.	2368	
1.50 - 1.99	.	.	.	175	351	.	.	.	.	.	88	.	614	
2.00 - 2.49	.	.	.	88	88	.	.	.	.	.	.	.	176	
2.50 - 2.99	.	.	.	.	.	.	88	.	.	.	.	.	88	
3.00 - 3.49	.	.	.	.	.	.	88	.	.	.	.	.	88	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	176	526	1140	1403	2368	790	2018	351	264	176	790	0		

HEIGHT(METERS)	MONTH SEP PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	.	.	.	.	189	660	.	.	283	.	1132	
0.50 - 0.99	.	94	.	377	849	283	2075	660	755	94	377	.	5564	
1.00 - 1.49	.	94	189	566	943	189	660	189	189	.	.	.	3019	
1.50 - 1.99	.	.	.	94	189	.	.	.	.	.	.	.	283	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	188	189	1037	1981	472	2924	1509	944	94	660	0		

(Continued)

(Sheet 3 of 4)

Table B9 (Concluded)

HEIGHT(METERS)	MONTH OCT PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	86	.	.	.	345	172	603	345	.	86	86	.	1723	
0.50 - 0.99	.	86	259	517	603	259	172	259	948	.	.	.	3103	
1.00 - 1.49	.	.	431	1207	259	172	259	259	603	.	.	.	3190	
1.50 - 1.99	.	.	.	431	259	.	.	.	172	.	.	.	862	
2.00 - 2.49	.	.	.	.	172	.	86	86	172	86	.	.	602	
2.50 - 2.99	.	.	.	.	.	259	.	.	86	.	.	.	345	
3.00 - 3.49	.	.	.	.	.	86	86	.	.	.	.	.	172	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	86	86	690	2155	1638	948	1206	949	1981	172	86	0		

HEIGHT(METERS)	MONTH NOV PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	.	.	.	.	.	.	.	.	.	0
0.50 - 0.99	.	85	.	427	427	342	855	684	256	.	.	.	3076
1.00 - 1.49	.	85	855	1624	940	855	256	256	.	.	85	.	4956
1.50 - 1.99	.	.	85	342	513	256	171	85	256	.	.	.	1708
2.00 - 2.49	.	.	.	.	85	85	.	.	.	85	.	.	255
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	170	940	2393	1965	1538	1282	1025	512	85	85	0	

HEIGHT(METERS)	MONTH DEC PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	.	.	185	185	.	.	.	.	.	370
0.50 - 0.99	.	.	.	556	.	.	1296	1111	.	.	.	.	2963
1.00 - 1.49	.	.	185	741	741	370	741	.	741	.	.	.	3519
1.50 - 1.99	.	.	185	185	.	.	.	.	185	.	.	.	555
2.00 - 2.49	.	.	370	.	185	185	185	.	.	.	.	.	925
2.50 - 2.99	.	.	.	.	.	.	.	.	370	.	.	.	370
3.00 - 3.49	.	.	.	.	.	.	370	.	.	.	.	.	370
3.50 - 3.99	.	.	.	.	.	.	370	185	.	.	185	.	740
4.00 - 4.49	.	.	.	.	.	.	.	.	185	.	.	.	185
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	0	740	1482	926	740	3147	1296	1481	0	185	0	

(Sheet 4 of 4)

Table B10  
1980 Through 1986 Annual Joint Distribution of  
H<sub>mo</sub> versus T<sub>p</sub> for Gage 630

HEIGHT(METERS)	ANNUAL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	22	16	30	61	108	114	303	295	228	83	148	5	1413	
0.50 - 0.99	31	120	249	459	586	491	759	697	857	173	220	20	4662	
1.00 - 1.49	.	9	125	390	478	292	237	206	389	45	146	6	2323	
1.50 - 1.99	.	.	8	130	265	115	69	59	128	40	89	6	909	
2.00 - 2.49	.	.	2	25	80	76	45	39	69	38	44	2	420	
2.50 - 2.99	.	.	.	.	6	35	18	17	36	14	27	.	153	
3.00 - 3.49	.	.	.	.	1	3	16	14	16	6	10	.	66	
3.50 - 3.99	.	.	.	.	.	.	3	9	12	6	5	.	35	
4.00 - 4.49	.	.	.	.	.	.	1	.	8	1	1	.	11	
4.50 - 4.99	.	.	.	.	.	.	.	.	2	.	.	.	2	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	2	1	.	3	
TOTAL	53	145	414	1065	1524	1126	1451	1336	1745	408	691	39		

Table B11  
1980 Through 1986 Monthly Joint Distribution of  
 $H_{mo}$  versus  $T_p$  for Gage 630

HEIGHT(METERS)	MONTH JAN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	133	13	.	119	66	13	199	106	252	27	80	.	1008
0.50 - 0.99	66	239	265	385	424	358	265	517	889	106	279	.	3793
1.00 - 1.49	.	.	146	531	610	265	119	119	557	.	80	13	2440
1.50 - 1.99	.	.	27	265	491	265	80	93	252	13	53	.	1539
2.00 - 2.49	.	.	.	27	199	212	106	27	146	53	27	13	810
2.50 - 2.99	.	.	.	.	13	93	66	27	53	27	53	.	332
3.00 - 3.49	.	.	.	.	.	.	27	.	27	.	.	.	54
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	13	.	.	.	13
4.50 - 4.99	.	.	.	.	.	.	.	.	13	.	.	.	13
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	199	252	438	1327	1803	1206	862	889	2202	226	572	26	

HEIGHT(METERS)	MONTH FEB PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	.	.	29	15	88	.	44	29	147	.	352	
0.50 - 0.99	15	73	103	367	470	235	470	617	1204	29	191	15	3789	
1.00 - 1.49	.	15	103	602	631	250	367	382	646	117	250	.	3363	
1.50 - 1.99	.	.	.	162	323	220	103	103	191	88	147	.	1337	
2.00 - 2.49	.	.	.	88	117	29	44	73	117	73	132	.	673	
2.50 - 2.99	.	.	.	.	.	44	.	.	147	29	88	.	308	
3.00 - 3.49	.	.	.	.	.	.	.	15	44	15	29	.	103	
3.50 - 3.99	.	.	.	.	.	.	.	15	15	.	.	.	30	
4.00 - 4.49	.	.	.	.	.	.	.	.	44	.	.	.	44	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	15	88	206	1219	1570	793	1072	1205	2452	380	984	15		

HEIGHT(METERS)	MONTH MAR PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	13	.	.	13	66	13	92	53	158	79	79	.	566	
0.50 - 0.99	13	92	237	395	434	421	487	697	855	197	237	.	4065	
1.00 - 1.49	.	.	197	382	553	368	289	303	737	79	421	.	3329	
1.50 - 1.99	.	.	.	224	250	79	92	92	237	118	158	.	1250	
2.00 - 2.49	.	.	.	13	53	39	53	53	79	53	79	.	422	
2.50 - 2.99	.	.	.	.	26	13	13	13	13	26	53	.	157	
3.00 - 3.49	.	.	.	.	13	.	13	26	53	13	.	.	118	
3.50 - 3.99	.	.	.	.	.	.	.	26	13	.	13	.	52	
4.00 - 4.49	.	.	.	.	.	.	13	.	.	.	13	.	26	
4.50 - 4.99	.	.	.	.	.	.	.	.	13	.	.	.	13	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	26	92	434	1027	1395	933	1052	1263	2158	565	1053	0		

(Continued)

(Sheet 1 of 4)

Table B11 (Continued)

HEIGHT(METERS)	MONTH APR PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	13	27	27	40	13	378	256	175	94	121	.	1144
0.50 - 0.99	108	162	243	432	513	540	837	661	1188	324	324	.	5332
1.00 - 1.49	.	13	121	256	445	337	270	297	432	81	162	.	2414
1.50 - 1.99	.	.	.	94	135	108	40	67	148	13	108	.	713
2.00 - 2.49	.	.	.	27	27	.	27	67	40	40	.	.	228
2.50 - 2.99	.	.	.	.	.	13	27	.	13	40	13	.	106
3.00 - 3.49	.	.	.	.	.	.	13	27	.	.	.	.	40
3.50 - 3.99	.	.	.	.	.	.	13	.	.	.	.	.	13
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	108	188	391	836	1160	1011	1605	1375	1996	592	728	0	

HEIGHT(METERS)	MONTH MAY PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	13	13	39	104	169	182	403	286	182	26	65	.	1482
0.50 - 0.99	26	195	416	702	650	715	1170	1144	676	26	130	.	5850
1.00 - 1.49	.	.	04	208	364	182	299	208	351	13	117	.	1846
1.50 - 1.99	.	.	13	52	91	26	117	.	78	39	91	.	507
2.00 - 2.49	.	.	.	26	13	65	.	26	.	39	39	.	208
2.50 - 2.99	.	.	.	.	.	.	13	13	13	26	13	.	78
3.00 - 3.49	.	.	.	.	.	.	.	.	.	13	13	.	26
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	39	208	572	1092	1287	1170	2002	1677	1300	182	468	0	

HEIGHT(METERS)	MONTH JUN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	28	42	70	112	253	379	576	590	225	28	14	.	2317
0.50 - 0.99	28	154	393	688	702	660	1447	983	660	225	42	.	5982
1.00 - 1.49	.	.	56	239	225	211	239	140	126	.	70	.	1306
1.50 - 1.99	.	.	14	42	84	84	28	14	70	.	.	.	336
2.00 - 2.49	.	.	.	.	14	14	14	14	.	.	.	.	56
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	56	196	533	1081	1278	1348	2304	1741	1081	253	126	0	

(Continued)

(Sheet 2 of 4)

Table B11 (Continued)

HEIGHT(METERS)	MONTH JUL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	14	28	57	99	312	297	935	892	382	170	326	28	3540
0.50 - 0.99	28	127	283	496	822	637	1218	1020	453	297	71	85	5537
1.00 - 1.49	.	28	42	198	212	113	71	57	.	.	.	.	721
1.50 - 1.99	.	.	.	71	14	28	42	.	.	.	.	.	155
2.00 - 2.49	.	.	.	14	.	.	14	.	.	.	.	.	28
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	42	183	382	878	1360	1075	2280	1969	835	467	397	113	

HEIGHT(METERS)	MONTH AUG PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	14	42	85	127	227	269	538	567	411	85	142	.	2507	
0.50 - 0.99	28	85	255	567	765	793	1289	722	552	198	326	.	5580	
1.00 - 1.49	.	14	127	227	255	312	184	99	57	14	.	.	1289	
1.50 - 1.99	.	.	.	57	170	57	28	.	14	.	42	.	368	
2.00 - 2.49	.	.	.	28	28	14	28	.	14	.	14	.	126	
2.50 - 2.99	.	.	.	.	14	.	28	.	14	.	14	.	70	
3.00 - 3.49	.	.	.	.	.	14	14	.	14	.	.	.	42	
3.50 - 3.99	.	.	.	.	.	.	.	14	.	.	.	.	14	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	42	141	467	1006	1459	1459	2109	1402	1076	297	538	0		

HEIGHT(METERS)	MONTH SEP PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	14	14	41	14	14	68	342	342	164	110	14	1137	
0.50 - 0.99	.	55	137	274	562	397	712	644	1192	192	260	.	4425	
1.00 - 1.49	.	14	98	479	644	384	438	260	425	68	178	14	3000	
1.50 - 1.99	.	.	14	68	301	123	55	151	55	14	96	.	877	
2.00 - 2.49	.	.	.	41	82	27	14	41	98	41	27	.	369	
2.50 - 2.99	.	.	.	.	.	41	27	14	.	.	.	.	82	
3.00 - 3.49	.	.	.	.	.	.	.	14	14	14	14	.	56	
3.50 - 3.99	.	.	.	.	.	.	.	.	14	14	14	.	42	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	14	.	.	14	
TOTAL	0	83	261	903	1603	986	1314	1466	2138	521	699	28		

(Continued)

(Sheet 3 of 4)

Table B11 (Concluded)

HEIGHT(METERS)	MONTH OCT PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	24	.	.	.	61	73	207	158	255	49	148	.	973
0.50 - 0.99	.	49	158	316	450	389	462	353	973	170	365	12	3697
1.00 - 1.49	.	.	148	633	401	243	134	195	474	109	182	.	2517
1.50 - 1.99	.	.	.	170	450	85	61	73	182	109	268	49	1447
2.00 - 2.49	.	.	.	12	122	231	61	61	182	61	109	12	851
2.50 - 2.99	.	.	.	.	12	134	24	73	49	12	49	.	353
3.00 - 3.49	.	.	.	.	.	24	12	.	12	.	36	.	84
3.50 - 3.99	.	.	.	.	.	.	.	24	.	24	.	.	48
4.00 - 4.49	.	.	.	.	.	.	.	.	24	.	.	.	24
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	24	49	304	1131	1496	1179	961	937	2151	534	1155	73	

HEIGHT(METERS)	MONTH NOV PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	15	15	15	31	46	77	46	139	123	77	170	.	754
0.50 - 0.99	31	46	370	540	556	494	432	525	725	185	185	77	4166
1.00 - 1.49	.	31	216	494	772	478	216	293	386	15	108	46	3055
1.50 - 1.99	.	.	15	216	340	216	108	46	139	77	15	15	1187
2.00 - 2.49	.	.	.	31	62	77	139	31	31	31	15	.	417
2.50 - 2.99	.	.	.	.	.	31	15	31	62	.	15	.	154
3.00 - 3.49	.	.	.	.	.	.	31	77	.	15	15	.	138
3.50 - 3.99	.	.	.	.	.	.	.	.	62	31	15	.	108
4.00 - 4.49	.	.	.	.	.	.	.	.	.	15	.	.	15
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	46	92	616	1312	1776	1373	987	1142	1528	446	538	138	

HEIGHT(METERS)	MONTH DEC PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	16	62	62	16	31	93	171	171	186	419	16	1243	
0.50 - 0.99	31	155	124	357	729	233	295	481	884	124	202	62	3677	
1.00 - 1.49	.	.	140	419	682	388	233	124	434	31	171	.	2622	
1.50 - 1.99	.	.	16	140	543	109	78	62	155	.	47	.	1150	
2.00 - 2.49	.	.	31	.	248	186	47	78	109	62	78	.	839	
2.50 - 2.99	.	.	.	.	.	31	.	31	78	.	16	.	156	
3.00 - 3.49	.	.	.	.	.	.	93	16	31	.	16	.	156	
3.50 - 3.99	.	.	.	.	.	.	31	31	47	.	16	.	125	
4.00 - 4.49	.	.	.	.	.	.	.	.	16	.	.	.	16	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	16	16	.	32	
TOTAL	31	171	373	978	2218	978	870	994	1925	419	981	78		

(Sheet 4 of 4)

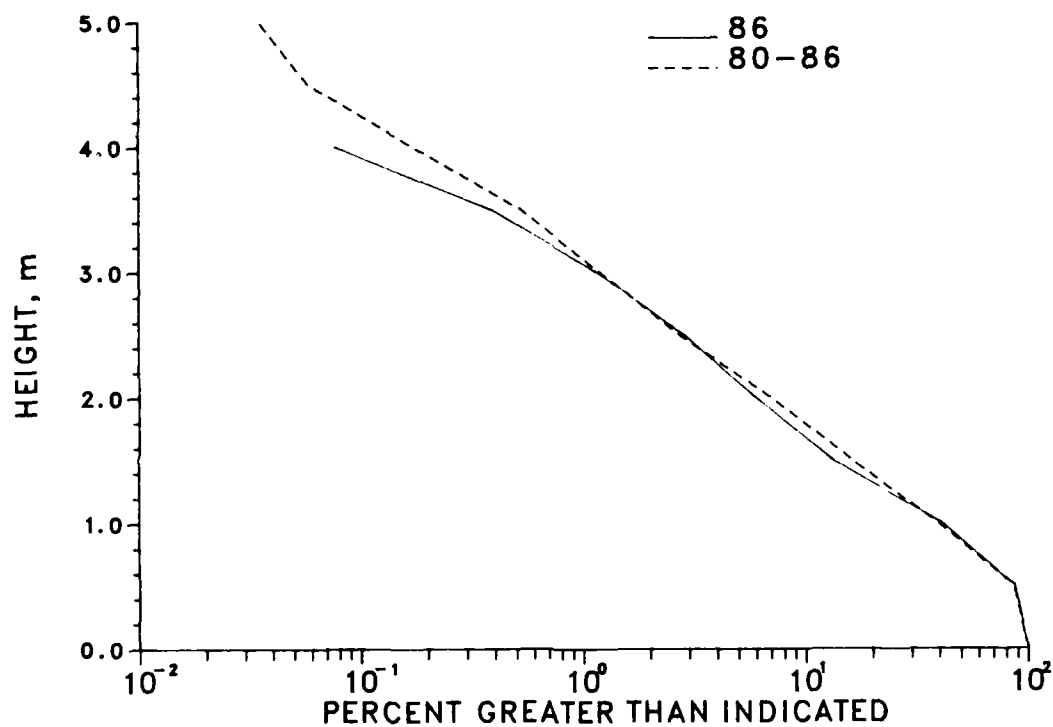


Figure B10. Annual cumulative distribution  
of  $H_{mo}$  for Gage 630



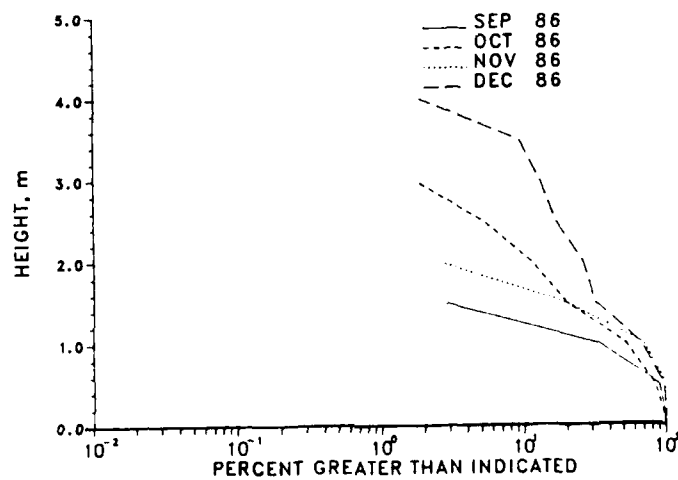
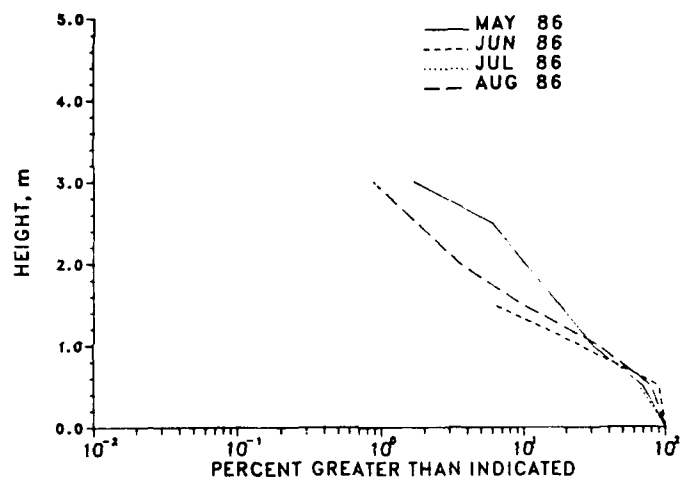
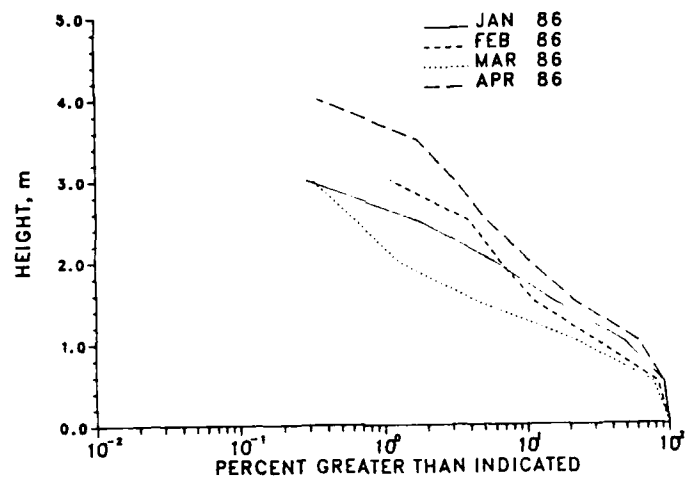


Figure B11. 1986 monthly cumulative distribution of  $H_{mo}$  for Gage 630

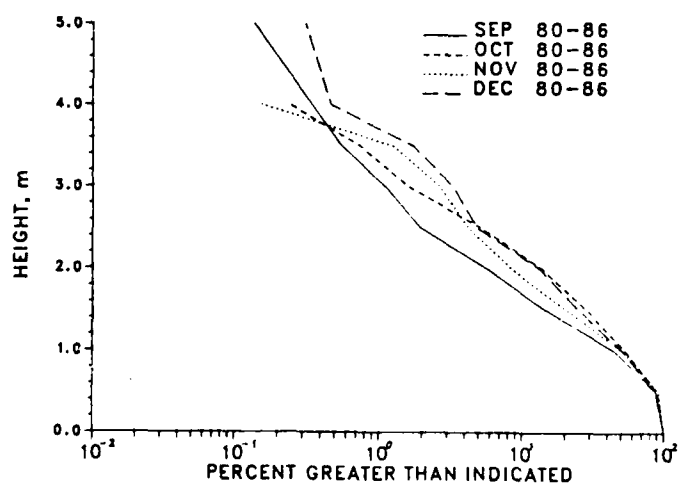
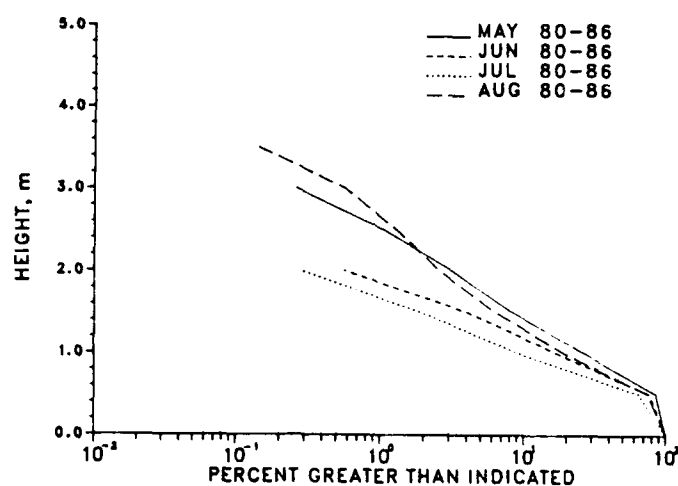
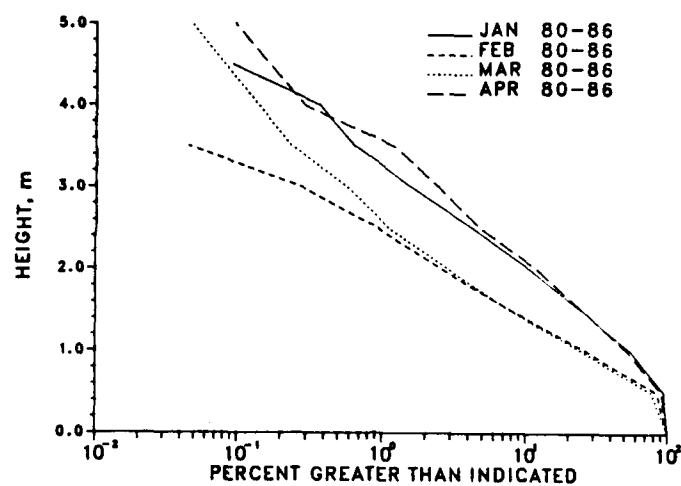


Figure B12. 1980 through 1986 monthly cumulative distribution of  $H_{mo}$  for Gage 630

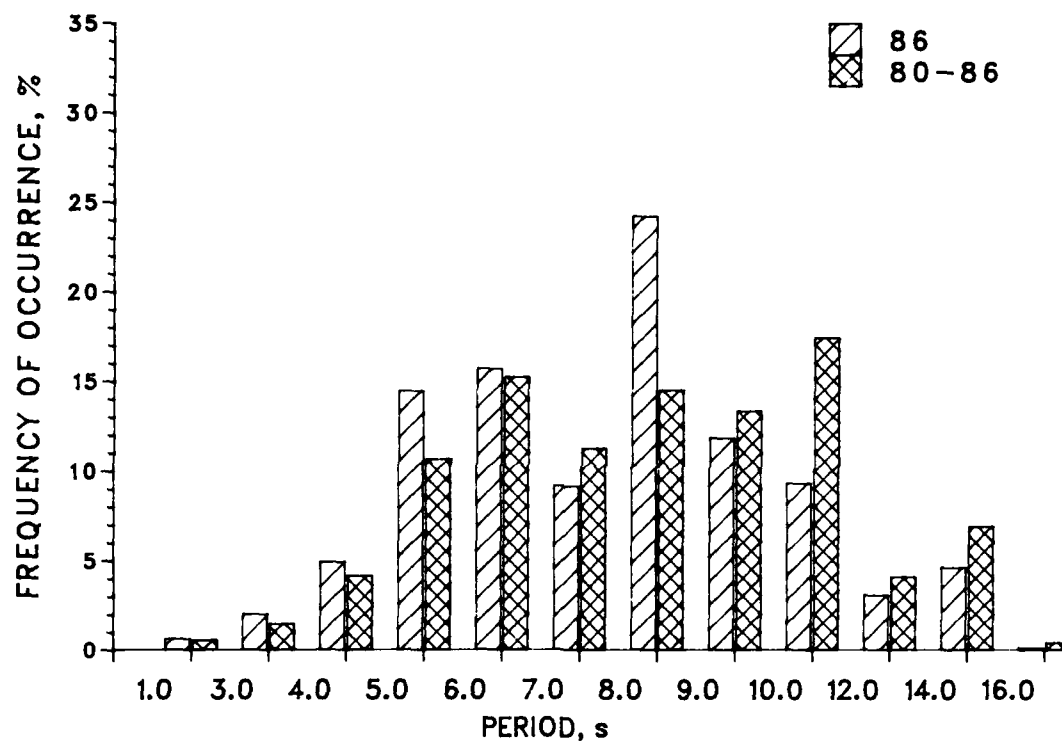


Figure B13. Annual distribution of  $T_p$  for Gage 630

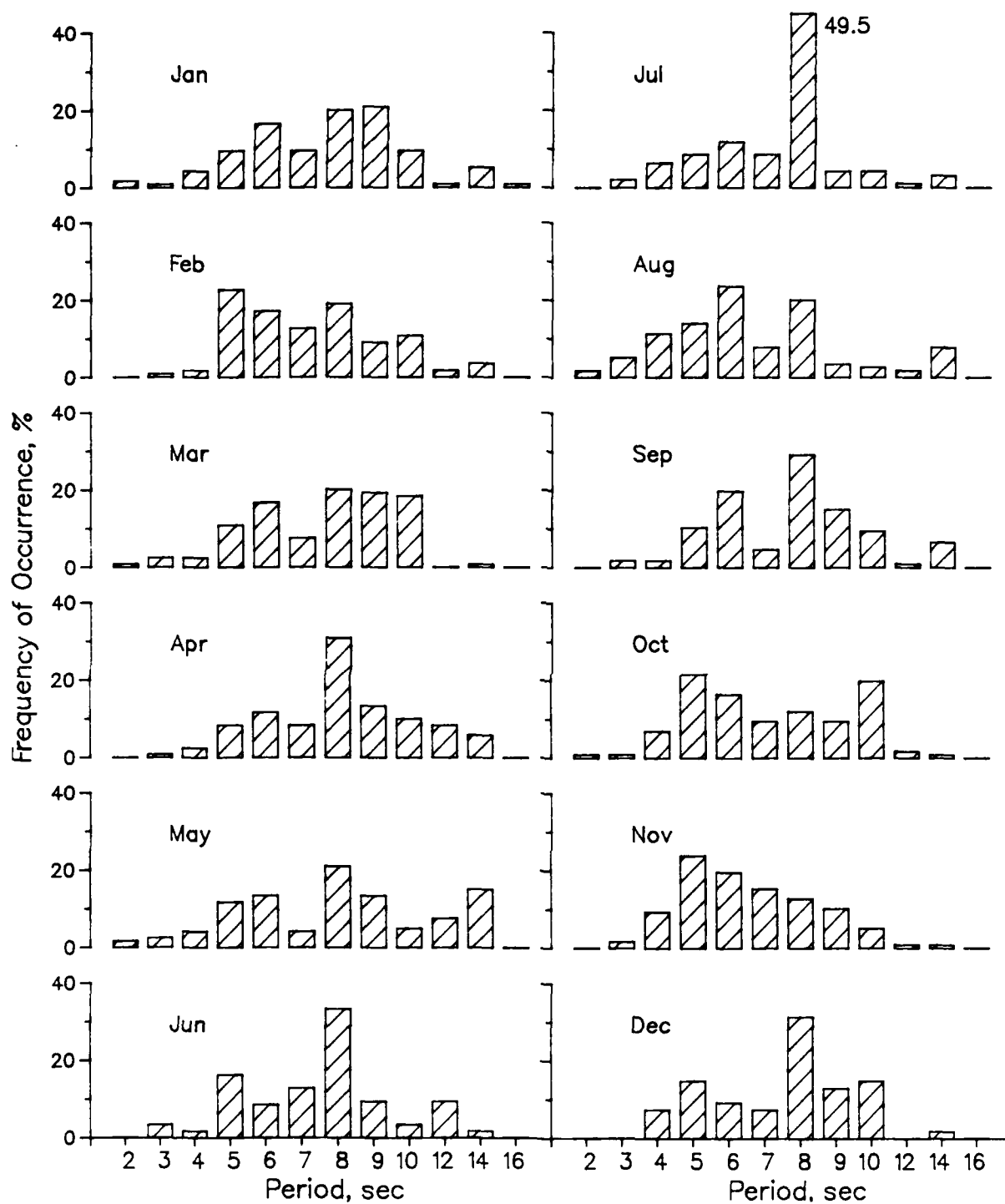


Figure B14. 1986 monthly distributions of  $T_p$  for Gage 630

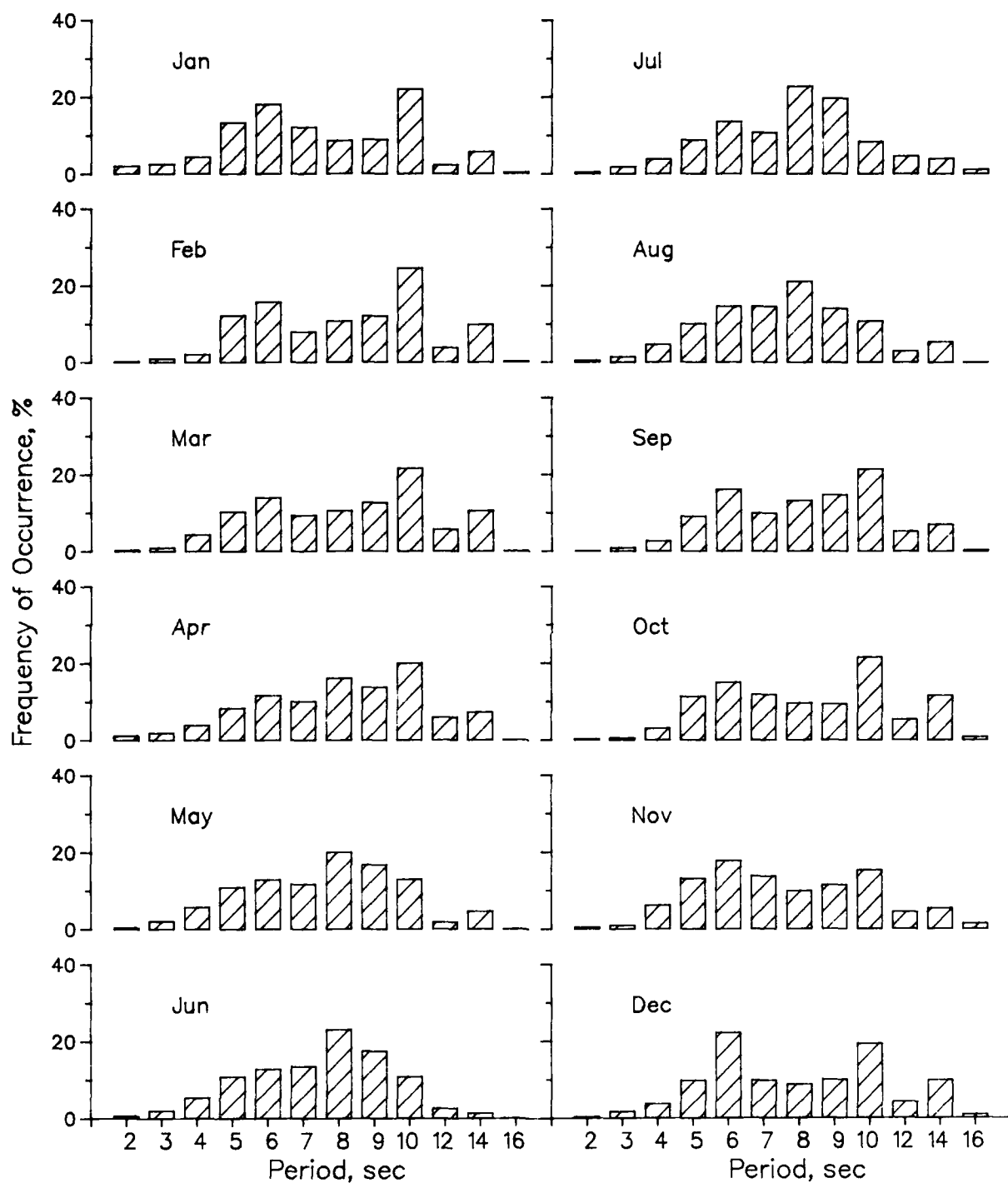


Figure B15. 1980 through 1986 monthly distribution of  $T_p$  for Gage 630

Table B12  
1986 Persistence of  $H_{mo}$  for Gage 630

Height m	Consecutive Day(s) or Longer																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19+
0.5	18	15		14	13	12		11	10	9				8		7			
1.0	50	34	24	21	18	14	12	8	7	3			2						
1.5	41	19	8	6	2	1													
2.0	22	9	5	1															
2.5	10	5	2																
3.0	6	1																	
3.5		1																	
4.0	1																		

Table B13  
1980 Through 1986 Persistence of  $H_{mo}$  for Gage 630

Height m	Consecutive Day(s) or Longer																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19+
0.5	23	19	17				12			10				8					
1.0	51	33	25	18	14	11	9				3								
1.5	38	21	11	7	5														
2.0	21	11	6			1													
2.5	11	5	2																
3.0	5	3																	
3.5	3	2																	
4.0	1																		

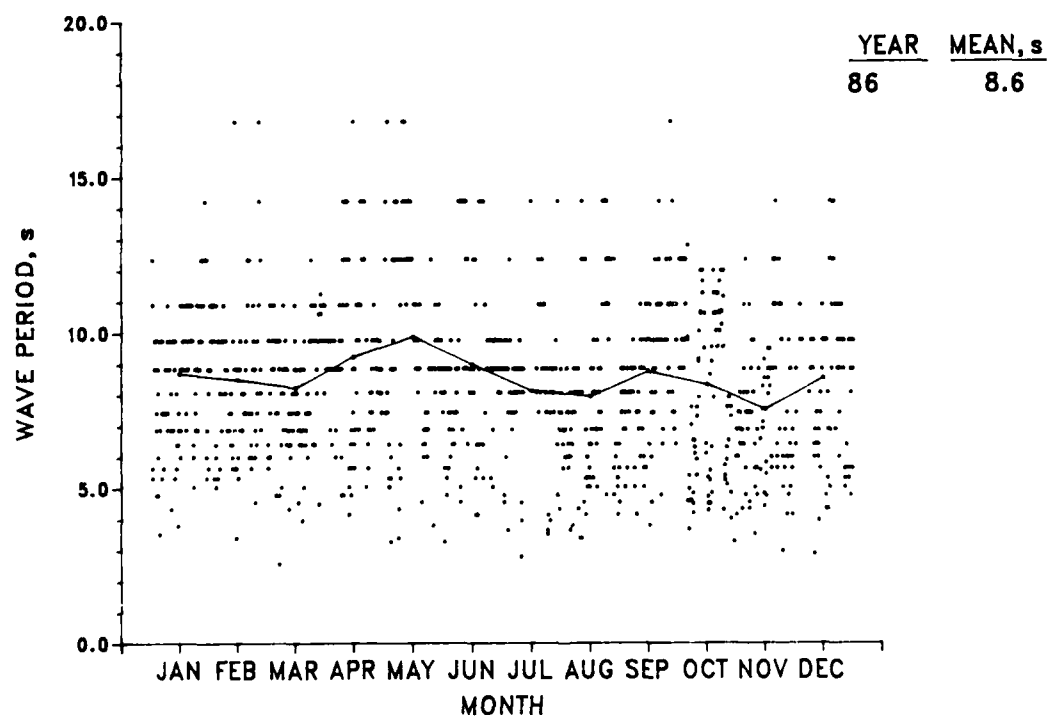
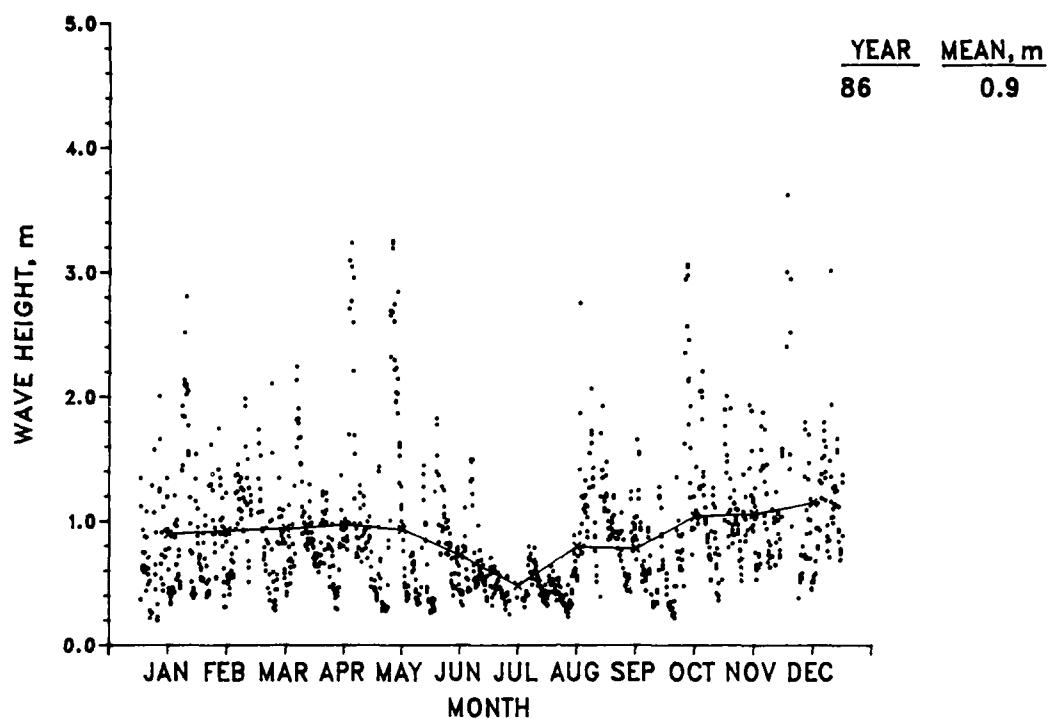


Figure B16. 1986 daily  $H_{mo}$  and  $T_p$  for Gage 640

Table B14  
1986 Annual Joint Distribution of  
H<sub>mo</sub> versus T<sub>p</sub> for Gage 640

HEIGHT(METERS)	ANNUAL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	15	38	53	83	83	166	791	339	181	143	377	.	2269
0.50 - 0.99	15	105	256	399	685	377	1145	919	467	98	136	.	4602
1.00 - 1.49	.	23	196	520	339	120	286	188	248	23	120	.	2063
1.50 - 1.99	.	.	.	136	166	60	38	53	60	75	45	.	633
2.00 - 2.49	.	.	.	8	45	30	30	.	45	38	23	.	219
2.50 - 2.99	.	.	.	.	.	8	15	8	53	30	23	.	137
3.00 - 3.49	.	.	.	.	.	15	.	23	8	15	15	.	76
3.50 - 3.99	.	.	.	.	.	.	8	.	.	.	.	.	8
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	30	166	505	1146	1318	776	2313	1530	1062	422	739	0	



Table B15  
1986 Monthly Joint Distribution of  
 $H_{mo}$  versus  $T_p$  for Gage 640

MONTH JAN													
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													
HEIGHT(METERS)	PERIOD(SECONDS)												TOTAL
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	.	.	171	513	1111	598	171	427	.	2991
0.50 - 0.99	.	171	85	427	684	256	513	855	598	.	256	.	3845
1.00 - 1.49	.	.	171	598	256	85	342	171	.	.	.	.	1623
1.50 - 1.99	.	.	.	171	256	85	.	256	.	.	.	.	768
2.00 - 2.49	.	.	.	.	171	85	256	.	85	.	.	.	597
2.50 - 2.99	.	.	.	.	.	.	85	.	85	.	.	.	170
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	171	256	1196	1367	682	1709	2393	1366	171	683	0	

HEIGHT(METERS)	MONTH FEB PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	.	.	377	377	377	943	94	94	.	848
0.50 - 0.99	.	94	.	849	660	377	1132	755	943	94	94	.	4998
1.00 - 1.49	.	.	94	755	566	283	660	472	377	.	377	.	3584
1.50 - 1.99	.	.	.	94	189	94	94	94	.	.	.	.	565
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	94	94	1698	1415	754	2263	1698	1320	94	565	0	

MONTH MAR													
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													
HEIGHT(METERS)	PERIOD(SECONDS)												TOTAL
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	84	.	.	.	84	84	504	336	84	.	.	.	1176
0.50 - 0.99	.	84	252	168	1092	336	1261	1429	840	.	.	.	5462
1.00 - 1.49	.	.	168	168	672	168	84	420	420	.	84	.	2184
1.50 - 1.99	.	.	.	336	84	252	168	84	.	.	.	.	924
2.00 - 2.49	.	.	.	.	84	84	84	.	.	.	.	.	252
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	84	84	420	672	2016	924	2101	2269	1344	0	84	0	

(Continued)

(Sheet 1 of 4)

Table B15 (Continued)

HEIGHT(METERS)	MONTH APR PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	339	593	508	85	2034	2034	254	424	424	.	1187	
0.50 - 0.99	.	.	.	85	678	424	508	169	169	.	169	.	6270	
1.00 - 1.49	.	.	.	.	85	.	.	169	85	.	85	.	1610	
1.50 - 1.99	.	.	.	.	.	.	.	.	.	85	85	.	255	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	85	.	85	
2.50 - 2.99	.	.	.	.	.	.	.	.	85	254	.	.	339	
3.00 - 3.49	.	.	.	.	.	.	.	85	85	85	.	.	255	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	0	339	678	1271	509	2542	2288	678	848	848	0		

HEIGHT(METERS)	MONTH MAY PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	86	.	172	86	259	1983	345	172	345	948	.	4396	
0.50 - 0.99	.	172	172	345	690	172	172	603	345	.	.	.	2671	
1.00 - 1.49	.	.	.	259	.	.	172	86	86	.	431	.	1034	
1.50 - 1.99	.	.	.	.	.	.	.	.	86	259	172	.	517	
2.00 - 2.49	.	.	.	.	86	.	.	.	.	345	172	.	603	
2.50 - 2.99	.	.	.	.	.	.	.	.	172	86	259	.	517	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	86	172	.	258	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	258	172	776	862	431	2327	1034	861	1121	2154	0		

HEIGHT(METERS)	MONTH JUN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	87	.	261	.	.	1217	348	87	435	522	.	2957	
0.50 - 0.99	.	.	261	261	870	261	1739	1130	.	783	.	.	5305	
1.00 - 1.49	.	.	87	261	261	87	348	.	261	.	.	.	1305	
1.50 - 1.99	.	.	.	87	87	174	87	.	.	.	.	.	435	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	87	348	870	1218	522	3391	1478	348	1218	522	0		

(Continued)

(Sheet 2 of 4)

Table B15 (Continued)

HEIGHT(METERS)	MONTH JUL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	110	.	220	.	549	769	3187	659	330	220	220	.	6264	
0.50 - 0.99	.	549	549	110	110	549	1429	.	220	.	220	.	3736	
1.00 - 1.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
1.50 - 1.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	110	549	769	110	659	1318	4616	659	550	220	440	0		

HEIGHT(METERS)	MONTH AUG PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	261	261	435	348	348	1304	.	.	87	522	.	3566	
0.50 - 0.99	.	87	.	783	1043	87	696	87	87	.	435	.	3305	
1.00 - 1.49	.	.	348	696	261	174	435	87	174	87	87	.	2349	
1.50 - 1.99	.	.	.	174	.	.	.	87	.	348	.	.	609	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	87	.	.	87	
2.50 - 2.99	.	.	.	.	.	.	87	.	.	.	.	.	87	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	348	609	2088	1652	609	2522	261	261	609	1044	0		

HEIGHT(METERS)	MONTH SEP PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	.	.	94	377	283	377	.	660	.	1791
0.50 - 0.99	.	.	189	377	849	660	1887	1226	755	189	189	.	6321
1.00 - 1.49	.	94	94	472	94	283	377	94	94	.	.	.	1602
1.50 - 1.99	.	.	.	94	94	.	94	.	.	.	.	.	282
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	94	283	943	1037	1037	2735	1603	1226	189	849	0	

(Continued)

(Sheet 3 of 4)

Table B15 (Concluded)

MONTH OCT													
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													
HEIGHT(METERS)	PERIOD(SECONDS)												TOTAL
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	177	88	.	265	265	531	88	.	619	.	2033
0.50 - 0.99	.	177	619	177	796	442	177	265	1062	.	88	.	3803
1.00 - 1.49	.	.	619	619	88	.	.	265	708	.	.	.	2299
1.50 - 1.99	.	.	.	177	177	.	.	.	354	.	.	.	708
2.00 - 2.49	.	.	.	.	88	177	.	.	442	.	.	.	707
2.50 - 2.99	.	.	.	.	.	88	.	88	88	.	.	.	264
3.00 - 3.49	.	.	.	.	.	88	.	88	.	.	.	.	176
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	177	1415	1061	1149	1060	442	1237	2742	0	707	0	

HEIGHT(METERS)	MONTH NOV PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	.	.	.	.	.	.	.	.	.	0
0.50 - 0.99	89	.	268	268	536	714	1696	893	357	.	89	.	4910
1.00 - 1.49	.	89	714	1429	625	268	179	.	268	89	268	.	3929
1.50 - 1.99	.	.	.	357	446	89	.	.	89	.	89	.	1070
2.00 - 2.49	.	.	.	89	.	.	.	.	.	.	.	.	89
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	89	89	982	2143	1607	1071	1875	893	714	89	446	0	

HEIGHT(METERS)	MONTH DEC PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 ~ 0.49	.	.	.	.	.	.	100	100	200	.	.	.	400
0.50 ~ 0.99	100	.	400	400	200	300	1100	1600	200	100	100	.	4500
1.00 ~ 1.49	.	100	.	900	500	100	300	500	500	100	100	.	3100
1.50 ~ 1.99	.	.	.	100	600	.	.	100	200	200	200	.	1400
2.00 ~ 2.49	.	.	.	.	100	.	.	.	.	.	.	.	100
2.50 ~ 2.99	.	.	.	.	.	100	.	.	200	.	.	.	200
3.00 ~ 3.49	.	.	.	.	.	.	100	100	.	.	.	.	200
3.50 ~ 3.99	.	.	.	.	.	.	100	.	.	.	.	.	100
4.00 ~ 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 ~ 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 ~ GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	100	100	400	1400	1400	500	1600	2400	1300	400	400	0	

(Sheet 4 of 4)

Table B16  
1985 Through 1986 Annual Joint Distribution of  
H<sub>mo</sub> versus T<sub>p</sub> for Gage 640

HEIGHT(METERS)	ANNUAL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	23	53	49	87	137	205	698	421	319	209	345	4	2550	
0.50 - 0.99	11	121	213	421	562	361	1063	706	459	182	281	4	4384	
1.00 - 1.49	.	15	148	463	361	159	304	197	224	15	99	.	1985	
1.50 - 1.99	.	.	.	133	194	76	68	61	53	38	49	.	672	
2.00 - 2.49	.	.	.	11	38	38	46	23	34	23	15	.	228	
2.50 - 2.99	.	.	.	.	.	8	15	11	30	15	19	.	98	
3.00 - 3.49	.	.	.	.	.	11	.	27	11	8	11	.	68	
3.50 - 3.99	.	.	.	.	.	.	8	.	.	.	4	.	12	
4.00 - 4.49	.	.	.	.	.	.	.	.	4	.	.	.	4	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	34	189	410	1115	1292	858	2202	1446	1134	490	823	8		

Table B17  
1985 Through 1986 Monthly Joint Distribution of  
H<sub>mo</sub> versus T<sub>p</sub> for Gage 640

MONTH JAN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD														TOTAL
HEIGHT(METERS)	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	87	43	.	.	173	649	823	519	130	346	43	2813	
0.50 - 0.99	.	216	260	519	606	260	866	519	390	.	260	.	3896	
1.00 - 1.49	.	.	173	519	476	130	303	130	.	.	43	.	1774	
1.50 - 1.99	.	.	.	130	519	87	43	130	.	.	.	.	909	
2.00 - 2.49	.	.	.	.	130	87	216	.	43	.	.	.	476	
2.50 - 2.99	.	.	.	.	.	.	87	.	43	.	.	.	130	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	303	476	1168	1731	737	2164	1602	995	130	649	43		

MONTH FEB PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD														TOTAL
HEIGHT(METERS)	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	.	.	.	.	191	287	48	96	191	.	813	
0.50 - 0.99	.	144	.	574	670	478	1196	1005	861	144	96	48	5216	
1.00 - 1.49	.	.	96	1005	670	287	383	335	287	.	191	.	3254	
1.50 - 1.99	.	.	.	96	239	96	48	48	48	.	48	.	623	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	48	.	48	
3.00 - 3.49	.	.	.	.	.	.	.	48	.	.	.	.	48	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	144	96	1675	1579	861	1818	1723	1244	240	574	48		

MONTH MAR														TOTAL
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD														
HEIGHT(METERS)	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	42	.	.	.	42	83	542	375	292	167	167	.	1710	
0.50 - 0.99	.	42	167	500	750	333	1333	917	500	125	83	.	4750	
1.00 - 1.49	.	42	167	292	708	83	333	375	375	.	42	.	2417	
1.50 - 1.99	.	.	.	167	250	167	208	83	.	.	.	.	875	
2.00 - 2.49	.	.	.	.	42	42	83	42	.	.	.	.	209	
2.50 - 2.99	.	.	.	.	.	.	.	42	.	.	.	.	42	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	42	84	334	959	1792	708	2499	1834	1167	292	292	0		

(Continued)

(Sheet 1 of 4)

Table B17 (Continued)

HEIGHT(METERS)	MONTH APR PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	43	.	.	.	.	85	681	511	340	468	426	.	2554	
0.50 - 0.99	.	128	.	.	383	340	1447	1149	170	511	340	.	5106	
1.00 - 1.49	.	.	43	170	511	43	383	170	85	.	43	.	1448	
1.50 - 1.99	.	.	.	.	128	43	43	.	43	43	43	.	343	
2.00 - 2.49	.	.	.	43	.	.	.	43	43	.	43	.	172	
2.50 - 2.99	.	.	.	.	.	.	.	.	43	128	.	.	171	
3.00 - 3.49	.	.	.	.	.	.	.	43	43	43	43	.	172	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	43	.	43	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	43	128	213	681	1022	511	2554	1916	767	1193	981	0		

HEIGHT(METERS)	MONTH MAY PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	42	125	42	208	333	208	1083	250	125	292	458	.	3166
0.50 - 0.99	.	125	250	417	833	542	1042	625	292	.	83	.	4209
1.00 - 1.49	.	.	42	208	167	125	458	167	83	.	250	.	1500
1.50 - 1.99	.	.	.	42	.	.	42	.	42	125	167	.	418
2.00 - 2.49	.	.	.	.	42	42	.	.	.	167	83	.	334
2.50 - 2.99	.	.	.	.	.	.	.	.	83	42	125	.	250
3.00 - 3.49	.	.	.	.	.	.	.	.	.	42	83	.	125
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	42	250	334	875	1375	917	2625	1042	625	668	1249	0	

HEIGHT(METERS)	MONTH JUN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	86	215	129	215	558	515	1416	558	172	215	258	.	4337
0.50 - 0.99	43	43	343	429	730	215	1202	687	258	386	43	.	4379
1.00 - 1.49	.	.	43	215	258	172	172	86	129	.	.	.	1075
1.50 - 1.99	.	.	.	43	43	86	43	.	.	.	.	.	215
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	129	258	515	902	1589	988	2833	1331	559	601	301	0	

(Continued)

(Sheet 2 of 4)

Table B17 (Continued)

HEIGHT(METERS)	MONTH JUL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	47	.	142	.	379	758	1943	900	806	521	711	.	6207	
0.50 - 0.99	.	284	237	95	95	474	900	427	237	.	190	.	2939	
1.00 - 1.49	.	.	95	142	142	47	47	47	95	.	.	.	615	
1.50 - 1.99	.	.	.	.	47	47	95	47	.	.	.	.	236	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	47	284	474	237	663	1326	2985	1421	1138	521	901	0		

HEIGHT(METERS)	MONTH AUG PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	161	161	269	215	215	1022	108	.	108	323	.	2582	
0.50 - 0.99	.	269	54	538	860	54	1237	430	54	269	484	.	4249	
1.00 - 1.49	.	.	269	538	161	161	753	108	108	54	54	.	2206	
1.50 - 1.99	.	.	.	323	108	54	.	54	.	215	.	.	754	
2.00 - 2.49	.	.	.	.	.	54	.	54	.	54	.	.	162	
2.50 - 2.99	.	.	.	.	.	.	54	.	.	.	.	.	54	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	430	484	1668	1344	538	3066	754	162	700	861	0		

HEIGHT(METERS)	MONTH SEP PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	50	.	50	201	251	1206	.	352	.	2110
0.50 - 0.99	.	.	101	251	452	352	1055	1005	1106	201	302	.	4825
1.00 - 1.49	.	50	50	352	151	402	402	352	503	.	101	.	2363
1.50 - 1.99	.	.	.	101	101	251	101	50	50	.	.	.	654
2.00 - 2.49	.	.	.	.	50	.	.	.	.	.	.	.	50
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	50	151	754	754	1055	1759	1658	2865	201	755	0	

(Continued)

(Sheet 3 of 4)



Table B17 (Concluded)

HEIGHT(METERS)	MONTH OCT PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	89	45	45	134	179	268	45	45	313	.	1163
0.50 - 0.99	.	179	536	402	670	580	848	179	625	45	491	.	4555
1.00 - 1.49	.	.	402	491	134	89	89	313	536	.	.	.	2054
1.50 - 1.99	.	.	.	402	223	45	89	223	268	.	.	.	1250
2.00 - 2.49	.	.	.	.	89	179	45	45	223	.	.	.	581
2.50 - 2.99	.	.	.	.	.	45	45	45	89	.	.	.	224
3.00 - 3.49	.	.	.	.	.	45	.	89	.	.	.	.	134
3.50 - 3.99	.	.	.	.	.	.	45	.	.	.	.	.	45
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	179	1027	1340	1161	1117	1340	1162	1786	90	804	0	

HEIGHT(METERS)	MONTH NOV PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	.	187	.	93	93	93	.	187	93	.	746
0.50 - 0.99	47	.	140	234	327	467	1028	701	561	374	607	.	4486
1.00 - 1.49	.	47	421	888	467	327	234	.	234	93	280	.	2991
1.50 - 1.99	.	.	.	234	280	47	93	47	93	.	93	.	887
2.00 - 2.49	.	.	.	93	.	47	187	93	93	.	.	.	513
2.50 - 2.99	.	.	.	.	.	47	.	47	.	.	.	.	94
3.00 - 3.49	.	.	.	.	.	47	.	93	93	.	.	.	233
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	47	.	.	.	47
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	47	47	561	1636	1074	1075	1635	1074	1121	654	1073	0	

MONTH DEC PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD														TOTAL
HEIGHT(METERS)	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	47	.	94	47	141	329	563	329	235	516	.	2301	
0.50 - 0.99	47	47	235	610	329	188	563	798	516	141	469	.	3943	
1.00 - 1.49	.	47	.	845	423	94	141	282	282	47	188	.	2349	
1.50 - 1.99	.	.	.	94	376	.	.	47	94	94	235	.	940	
2.00 - 2.49	.	.	.	.	94	.	.	.	.	47	47	.	188	
2.50 - 2.99	.	.	.	.	.	.	.	.	94	.	47	.	141	
3.00 - 3.49	.	.	.	.	.	47	.	47	.	.	.	.	94	
3.50 - 3.99	.	.	.	.	.	.	47	.	.	.	.	.	47	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	47	141	235	1643	1269	470	1080	1737	1315	564	1502	0		

(Sheet 4 of 4)

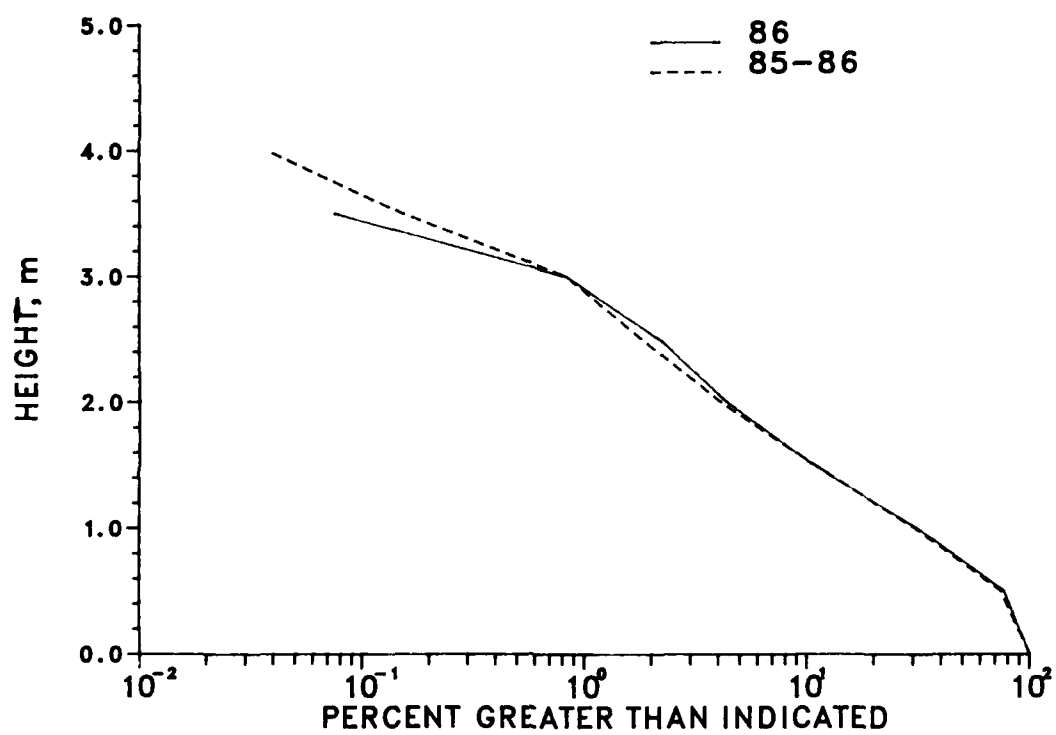


Figure B17. Annual cumulative distribution  
of  $H_{mo}$  for Gage 640

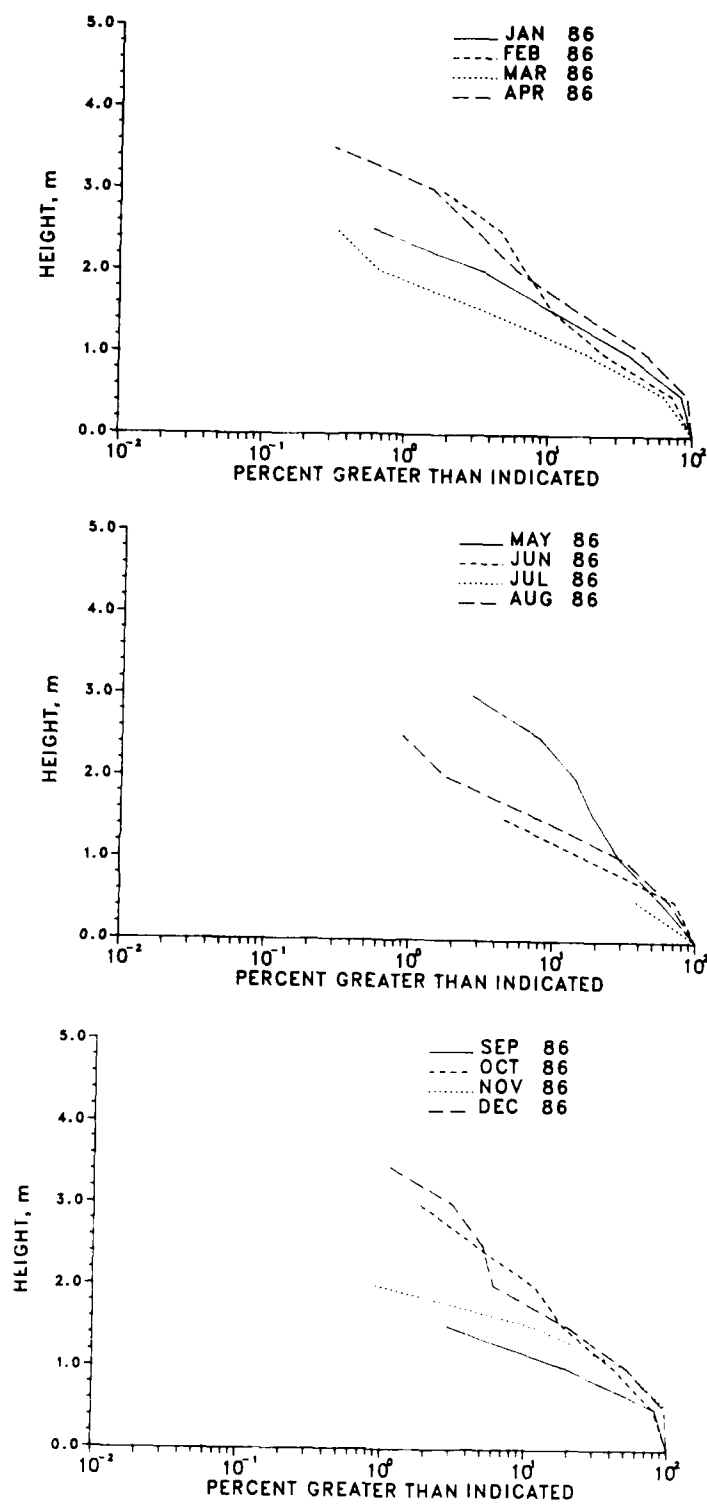


Figure B18. 1986 monthly cumulative distribution of  $H_{mo}$  for Gage 640

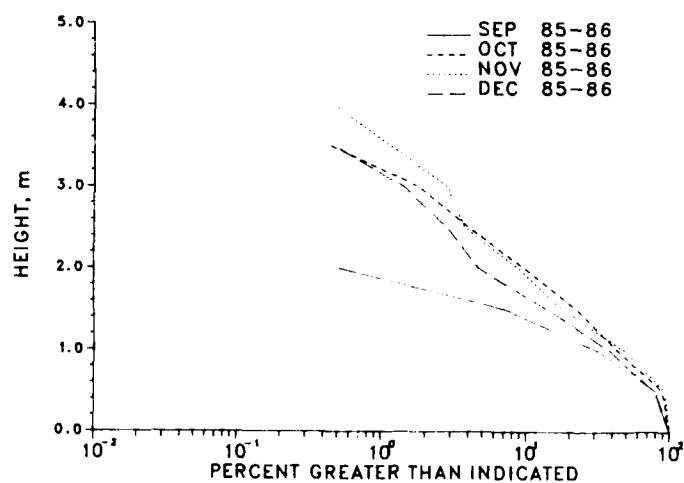
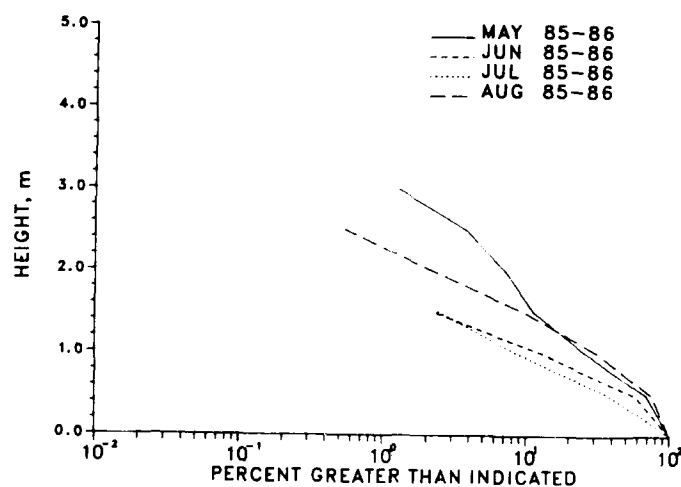
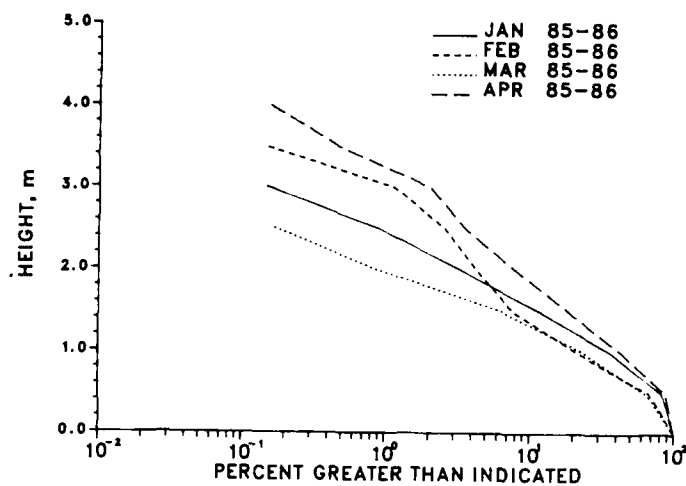


Figure B19. 1985 through 1986 monthly cumulative distribution of  $H_{mo}$  for Gage 640

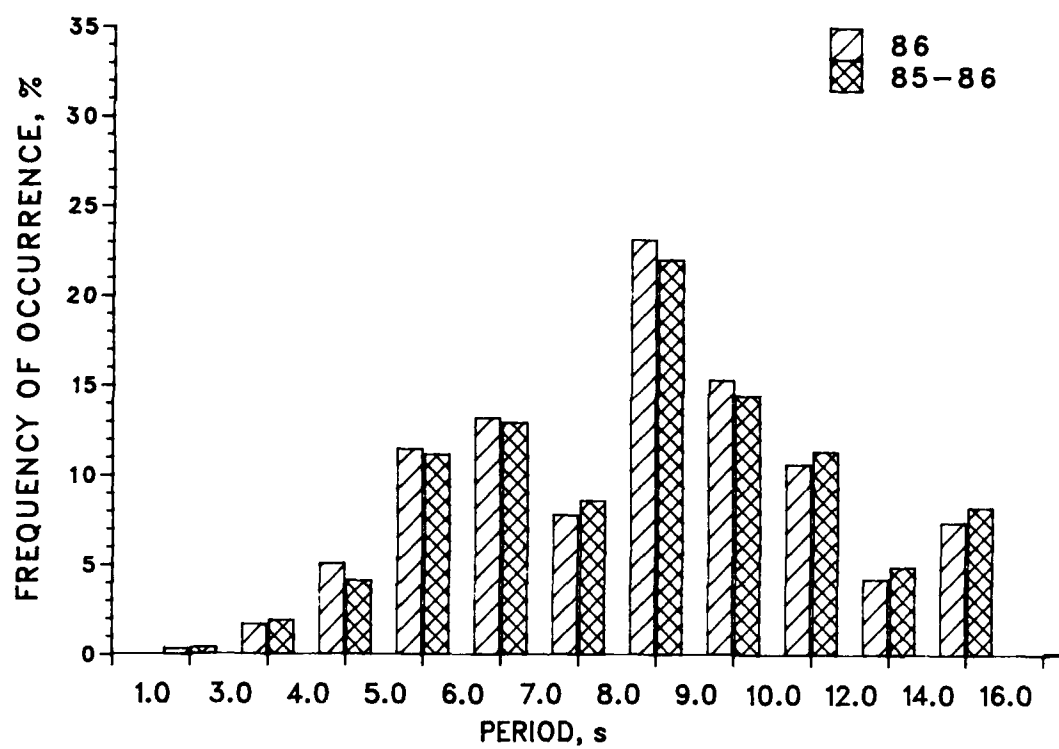


Figure B20. Annual distribution of  $T_p$  for Gage 640

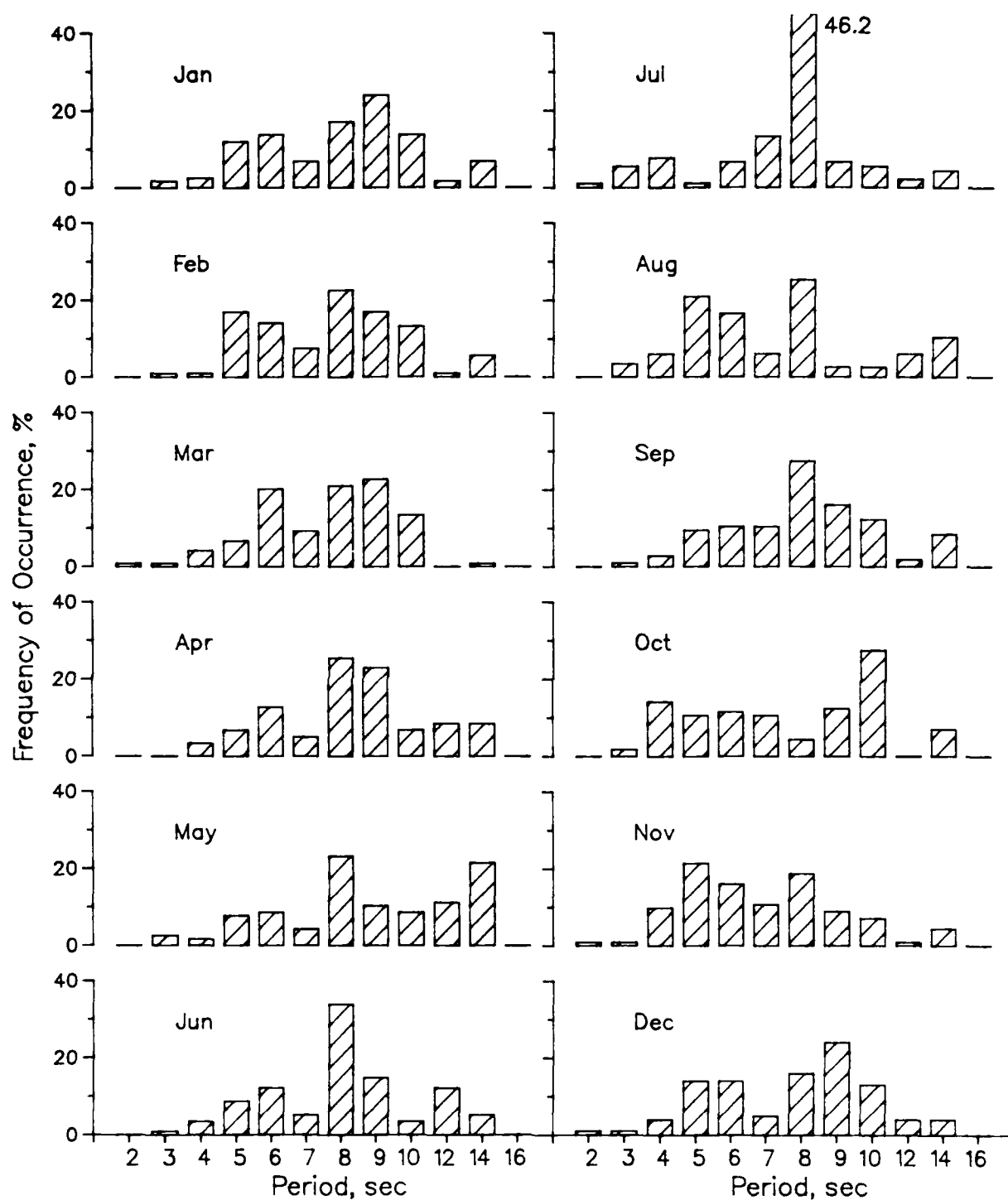


Figure B21. 1986 monthly wave period distributions for Gage 640

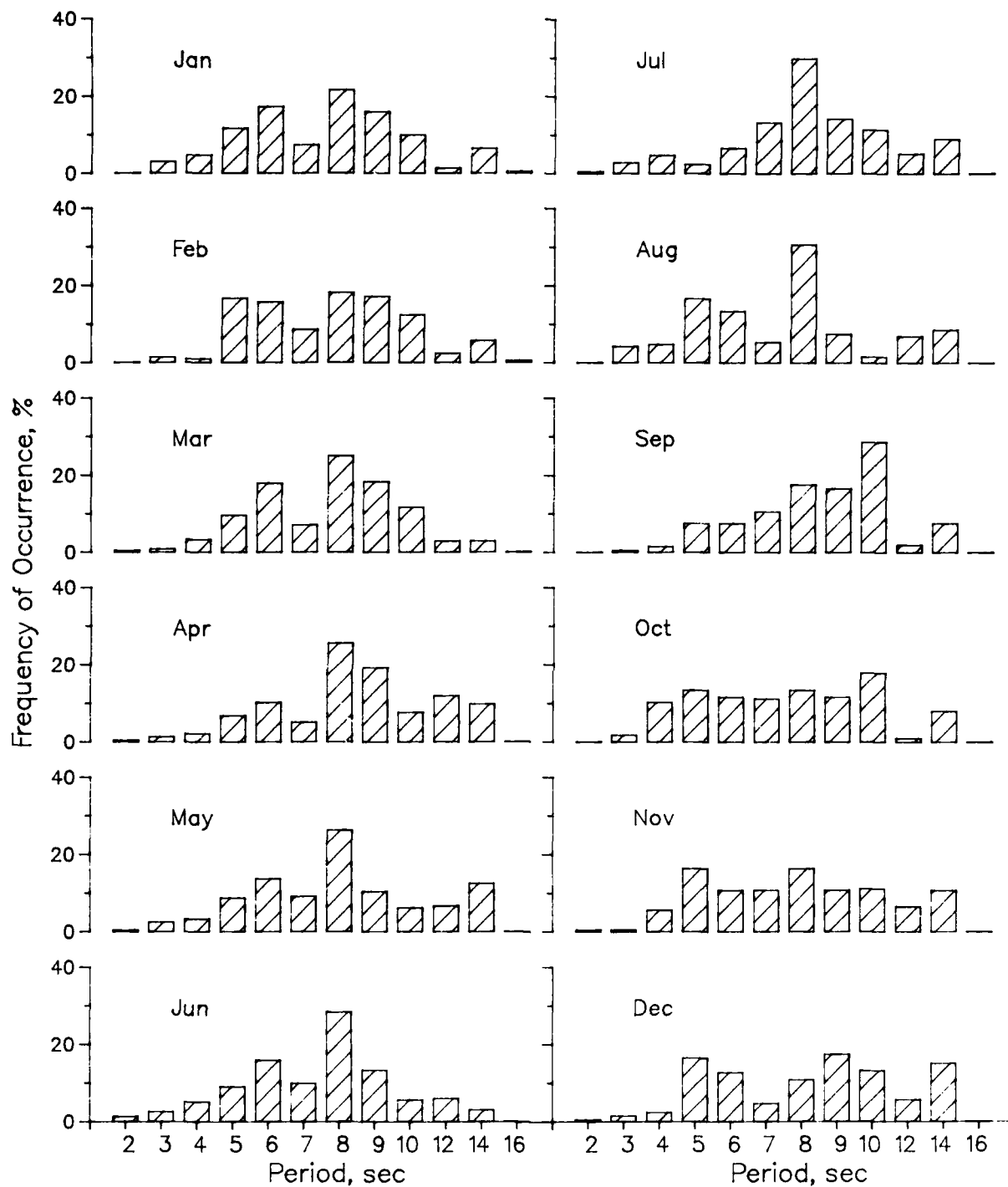


Figure B22. 1985-86 monthly wave period distributions for Gage 640

Table B18  
1986 Persistence of  $H_{mo}$  for Gage 640

Height m	Consecutive Day(s) or Longer																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19+
0.5	25	24	21	19	16	15	14		13	12				8					7
1.0	58	37	25	18	10	7	5	2	1										
1.5	30	19	8	5		1													
2.0	14	6	5		1														
2.5	8	5	3																
3.0	5	2																	
3.5		1																	
4.0	1																		

Table B19  
1985 Through 1986 Persistence of  $H_{mo}$  for Gage 640

Height m	Consecutive Day(s) or Longer																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19+
0.5	27	25	22	20	17	16			11	13			7						6
1.0	54	37	25	16	11	8			2										
1.5	34	18	7	4		2													
2.0	15	7			1														
2.5	9	4	2																
3.0	6	3																	
3.5	3																		
4.0	2																		



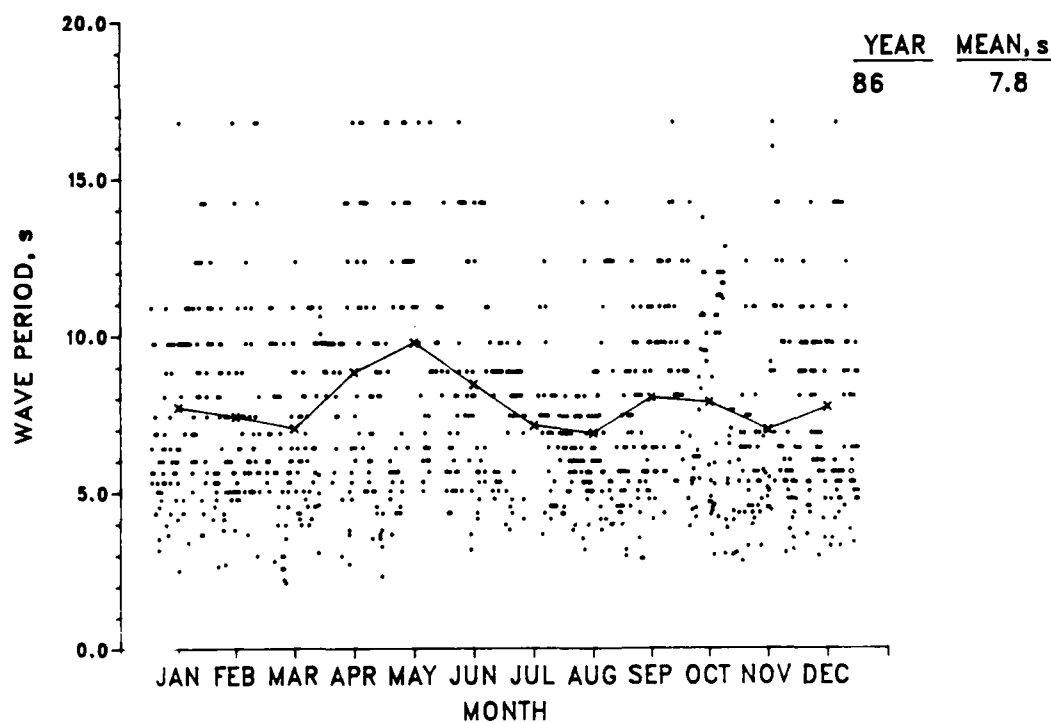
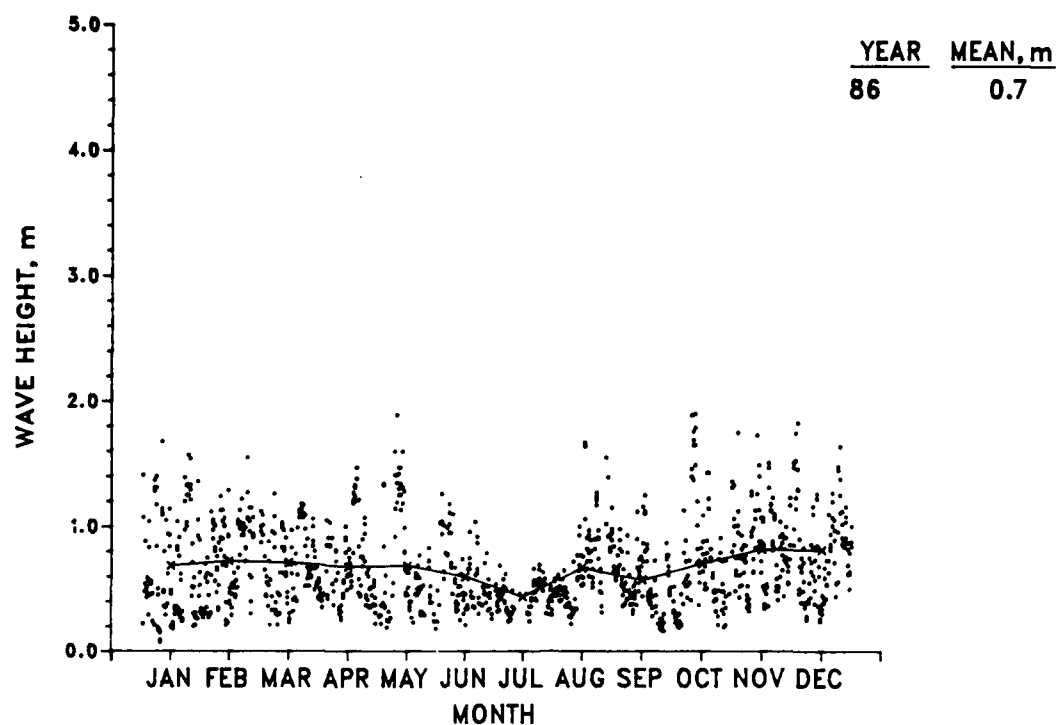


Figure B23. 1986 daily  $H_{mo}$  and  $T_p$  for Gage 645

Table B20  
1986 Annual Joint Distribution of  
H<sub>mo</sub> versus T<sub>p</sub> for Gage 645

HEIGHT(METERS)	ANNUAL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	94	141	266	422	297	234	742	563	414	250	289	8	3720
0.50 - 0.99	70	313	594	1344	555	195	414	359	258	70	234	.	4406
1.00 - 1.49	.	8	148	523	313	78	117	63	156	94	164	.	1664
1.50 - 1.99	.	.	.	16	39	23	31	16	47	16	16	.	204
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	8	.	.	.	.	.	8
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	164	462	1008	2305	1204	530	1312	1001	875	430	703	8	

Table B21  
1986 Monthly Joint Distribution of  
 $H_{mo}$  versus  $T_p$  for Gage 645

HEIGHT(METERS)	MONTH JAN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	85	254	508	169	254	85	339	1525	593	339	254	.	4405	
0.50 - 0.99	.	339	339	1017	339	85	254	254	169	.	.	.	2796	
1.00 - 1.49	.	.	85	1017	593	169	169	254	85	.	169	.	2541	
1.50 - 1.99	.	.	.	85	.	85	85	.	.	.	.	.	255	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	85	593	932	2288	1186	424	847	2033	847	339	423	0		

MONTH FEB PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD														TOTAL
HEIGHT(METERS)	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	92	.	367	826	.	183	275	275	550	183	275	.	3026	
0.50 - 0.99	183	275	459	1376	550	367	275	367	275	.	275	.	4402	
1.00 - 1.49	.	.	92	1376	183	367	183	.	92	.	183	.	2476	
1.50 - 1.99	.	.	.	.	92	.	.	.	.	.	.	.	92	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	275	275	918	3578	825	917	733	642	917	183	733	0		

MONTH MAR														TOTAL
PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD														
HEIGHT(METERS)	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	522	261	174	174	.	87	522	522	174	.	87	.	2523	
0.50 - 0.99	87	174	435	1652	696	261	261	1217	696	.	.	.	5479	
1.00 - 1.49	.	87	348	783	261	87	174	.	261	.	.	.	2001	
1.50 - 1.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	609	522	957	2609	957	435	957	1739	1131	0	87	0		

(Continued)

(Sheet 1 of 4)

Table B21 (Continued)

HEIGHT(METERS)	MONTH APR PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	196	294	294	196	98	.	686	784	196	588	294	.	3626
0.50 - 0.99	98	392	294	1275	294	294	588	588	98	98	686	.	4705
1.00 - 1.49	.	.	.	98	392	98	.	196	196	392	294	.	1666
1.50 - 1.99	.	.	.	.	.	.	.	.	.	.	.	.	0
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	294	686	588	1569	784	392	1274	1568	490	1078	1274	0	

HEIGHT(METERS)	MONTH MAY PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	.	220	879	220	220	659	659	769	330	659	.	4615
0.50 - 0.99	.	110	110	659	659	.	110	330	330	.	659	.	2967
1.00 - 1.49	.	.	110	220	220	.	.	.	110	330	1099	.	2089
1.50 - 1.99	.	.	.	.	.	.	.	.	110	110	110	.	330
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	110	440	1758	1099	220	769	989	1319	770	2527	0	

HEIGHT(METERS)	MONTH JUN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	110	769	110	220	1538	330	330	1099	330	.	4836	
0.50 - 0.99	.	220	549	1429	110	110	659	110	220	440	110	.	3957	
1.00 - 1.49	.	.	110	330	549	110	110	.	.	.	.	.	1209	
1.50 - 1.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	220	769	2528	769	440	2307	440	550	1539	440	0		

(Continued)

(Sheet 2 of 4)

Table B21 (Continued)

HEIGHT(METERS)	MONTH JUL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	241	1205	482	964	1446	2169	482	120	.	.	.	7109
0.50 - 0.99	.	120	602	361	482	120	843	.	120	.	241	.	2889
1.00 - 1.49	.	.	.	.	.	.	.	.	.	.	.	.	0
1.50 - 1.99	.	.	.	.	.	.	.	.	.	.	.	.	0
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	0	361	1807	843	1446	1566	3012	482	240	0	241	0	

HEIGHT(METERS)	MONTH AUG PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	263	88	877	877	439	614	.	.	88	263	.	3509	
0.50 - 0.99	.	526	702	2105	526	439	526	88	88	.	351	.	5351	
1.00 - 1.49	.	.	88	263	.	88	.	.	.	175	175	.	789	
1.50 - 1.99	.	.	.	.	175	88	88	.	.	.	.	.	351	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	0	789	878	3245	1578	1054	1228	88	88	263	789	0		

HEIGHT(METERS)	MONTH SEP PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	91	91	.	636	364	.	1000	545	545	273	909	.	4454
0.50 - 0.99	182	91	545	1273	909	273	909	455	273	.	182	.	5092
1.00 - 1.49	.	.	91	182	182	.	.	.	.	.	.	.	455
1.50 - 1.99	.	.	.	.	.	.	.	.	.	.	.	.	0
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	273	182	636	2091	1455	273	1909	1000	818	273	1091	0	

(Continued)

(Sheet 3 of 4)

Table B21 (Concluded)

HEIGHT(METERS)	MONTH OCT PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	93	278	185	93	556	463	741	278	833	93	370	.	3983
0.50 - 0.99	93	185	1296	926	370	.	93	278	741	.	.	.	3982
1.00 - 1.49	.	.	.	556	93	.	185	.	556	.	.	.	1390
1.50 - 1.99	.	.	.	.	.	93	.	93	370	93	.	.	649
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	186	463	1481	1575	1019	556	1019	649	2500	186	370	0	

MONTH NOV PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD														TOTAL
HEIGHT(METERS)	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	172	86	86	.	431	345	431	.	86	.	1637	
0.50 - 0.99	86	603	948	1724	1034	345	86	86	86	172	345	.	5515	
1.00 - 1.49	.	.	517	603	948	.	86	.	172	172	86	.	2584	
1.50 - 1.99	.	.	.	86	172	.	.	.	.	.	.	.	258	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	86	603	1637	2499	2240	345	603	431	689	344	517	0		

HEIGHT(METERS)	MONTH DEC PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	.	.	81	81	163	.	488	894	407	163	.	81	2358	
0.50 - 0.99	81	569	732	1870	569	.	488	407	.	163	81	.	4960	
1.00 - 1.49	.	.	244	569	244	.	407	244	325	81	81	.	2195	
1.50 - 1.99	.	.	.	.	.	.	163	81	81	.	81	.	406	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	81	.	.	.	.	.	81	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	81	569	1057	2520	976	0	1627	1626	813	407	243	81		

(Sheet 4 of 4)

Table B22  
1980 Through 1986 Annual Joint Distribution of  
 $H_{mo}$  versus  $T_p$  for Gage 645

HEIGHT(METERS)	ANNUAL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	45	101	211	415	284	272	437	459	609	359	308	70	3570
0.50 - 0.99	24	185	482	1002	772	386	360	328	588	165	293	38	4623
1.00 - 1.49	.	1	50	291	374	170	97	91	183	113	168	10	1548
1.50 - 1.99	.	.	.	8	32	23	12	28	47	33	52	6	241
2.00 - 2.49	.	.	.	.	.	2	.	.	1	7	6	.	16
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	1	.	.	.	.	.	1
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	69	287	743	1716	1462	853	907	906	1428	677	827	124	

Table B23  
1980 Through 1986 Monthly Joint Distribution of  
 $H_{mo}$  versus  $T_p$  for Gage 645

HEIGHT(METERS)	MONTH JAN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	104	119	267	431	238	149	327	446	446	238	267	45	3077	
0.50 - 0.99	15	163	401	1085	921	282	149	223	684	74	297	30	4324	
1.00 - 1.49	.	.	74	505	698	312	208	89	238	30	223	.	2377	
1.50 - 1.99	.	.	.	15	15	30	15	30	89	.	15	.	209	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	15	.	.	15	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	119	282	742	2036	1872	773	699	788	1457	357	802	75		

HEIGHT(METERS)	MONTH FEB PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	15	74	192	413	88	147	206	103	752	162	133	15	2300	
0.50 - 0.99	59	192	280	973	664	280	324	339	959	236	383	.	4689	
1.00 - 1.49	.	.	29	487	605	221	118	133	324	310	236	.	2463	
1.50 - 1.99	.	.	.	.	59	88	29	29	29	88	206	.	528	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	15	.	.	15	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	74	266	501	1873	1416	736	677	604	2064	811	958	15		

HEIGHT(METERS)	MONTH MAR PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	145	132	225	291	145	79	264	238	370	185	304	.	2378	
0.50 - 0.99	26	304	449	1096	766	383	277	396	700	277	542	.	5216	
1.00 - 1.49	.	13	106	343	396	185	145	92	251	211	330	.	2072	
1.50 - 1.99	.	.	.	13	.	13	13	40	79	119	26	.	303	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	13	13	.	26	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	171	449	780	1743	1307	660	699	766	1400	805	1215	0		

(Continued)

(Sheet 1 of 4)



Table B23 (Continued)

HEIGHT(METERS)	MONTH APR PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	59	163	222	296	237	325	607	429	503	607	444	44	3936
0.50 - 0.99	30	237	429	917	621	340	414	325	902	118	414	15	4762
1.00 - 1.49	.	.	15	133	281	104	74	148	207	104	192	.	1258
1.50 - 1.99	.	.	.	.	.	.	15	.	15	.	15	.	45
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	89	400	666	1346	1139	769	1110	902	1627	829	1065	59	

HEIGHT(METERS)	MONTH MAY PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	27	146	240	573	373	386	493	519	626	240	373	40	4036
0.50 - 0.99	13	186	599	1212	959	426	439	360	493	120	213	27	5047
1.00 - 1.49	.	.	27	146	146	40	53	67	80	80	173	.	812
1.50 - 1.99	.	.	.	.	27	.	.	.	27	27	27	.	108
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	40	332	866	1931	1505	852	985	946	1226	467	786	67	

HEIGHT(METERS)	MONTH JUN PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	42	183	380	915	563	549	676	732	606	451	127	127	5351
0.50 - 0.99	28	141	563	1042	507	380	521	423	437	56	28	42	4168
1.00 - 1.49	.	.	14	113	113	28	42	14	127	.	28	.	479
1.50 - 1.99	.	.	.	.	.	.	.	.	.	.	.	.	0
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	70	324	957	2070	1183	957	1239	1169	1170	507	183	169	

(Continued)

(Sheet 2 of 4)

Table B23 (Continued)

HEIGHT(METERS)	MONTH JUL PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	42	84	391	642	614	558	1130	1018	879	446	307	112	6223	
0.50 - 0.99	.	126	460	739	628	349	432	279	167	139	42	84	3445	
1.00 - 1.49	.	.	14	167	56	28	42	.	28	.	.	.	335	
1.50 - 1.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	42	210	865	1548	1298	935	1604	1297	1074	585	349	196	3	

HEIGHT(METERS)	MONTH AUG PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	.	135	162	593	499	431	795	863	660	404	323	27	4892
0.50 - 0.99	13	270	620	1105	674	499	445	270	310	40	135	.	4381
1.00 - 1.49	.	.	13	121	175	108	13	27	54	54	54	.	619
1.50 - 1.99	.	.	.	.	27	40	13	.	13	13	.	.	106
2.00 - 2.49	.	.	.	.	.	.	.	.	.	.	.	.	0
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	13	405	795	1819	1375	1078	1266	1160	1037	511	512	27	0

HEIGHT(METERS)	MONTH SEP PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	28	28	57	199	156	213	284	355	809	340	383	99	2951	
0.50 - 0.99	57	128	482	794	780	567	426	525	596	312	525	28	5220	
1.00 - 1.49	.	.	71	340	397	184	128	142	184	43	142	28	1659	
1.50 - 1.99	.	.	.	14	43	14	.	14	.	.	43	.	128	
2.00 - 2.49	.	.	.	.	.	.	.	.	.	14	28	.	42	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	85	156	610	1347	1376	978	838	1036	1589	709	1121	155		

(Continued)

(Sheet 3 of 4)

Table B23 (Concluded)

HEIGHT(METERS)	MONTH OCT PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	39	39	52	183	209	183	196	170	535	209	352	91	2258
0.50 - 0.99	13	78	431	796	731	287	352	261	927	235	287	52	4450
1.00 - 1.49	.	.	26	431	470	366	170	196	405	235	248	39	2586
1.50 - 1.99	.	.	.	13	104	39	13	78	170	78	78	65	638
2.00 - 2.49	.	.	.	.	.	13	.	.	.	26	26	.	65
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	52	117	509	1423	1514	888	731	705	2037	783	991	247	

HEIGHT(METERS)	MONTH NOV PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD												TOTAL
	PERIOD(SECONDS)												
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER	
0.00 - 0.49	27	13	199	225	119	119	159	212	385	451	305	53	2267
0.50 - 0.99	27	172	531	1048	968	557	292	252	517	265	305	80	5014
1.00 - 1.49	.	.	80	318	650	279	106	40	146	252	239	53	2163
1.50 - 1.99	.	.	.	27	80	53	13	106	93	53	119	.	544
2.00 - 2.49	.	.	.	.	.	.	.	.	13	.	.	.	13
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0
3.00 - 3.49	.	.	.	.	.	.	.	.	.	.	.	.	0
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0
TOTAL	54	185	810	1618	1817	1008	570	610	1154	1021	968	186	

HEIGHT(METERS)	MONTH DEC PERCENT OCCURRENCE(X100) OF HEIGHT AND PERIOD													TOTAL
	PERIOD(SECONDS)													
	1.0- 2.9	3.0- 3.9	4.0- 4.9	5.0- 5.9	6.0- 6.9	7.0- 7.9	8.0- 8.9	9.0- 9.9	10.0- 11.9	12.0- 13.9	14.0- 15.9	16.0- LONGER		
0.00 - 0.49	13	108	162	243	162	135	135	432	756	580	364	189	3279	
0.50 - 0.99	13	216	513	1201	1012	270	243	283	405	94	351	94	4695	
1.00 - 1.49	.	.	121	391	513	175	67	148	162	27	148	.	1752	
1.50 - 1.99	.	.	.	13	27	.	27	27	40	13	94	.	241	
2.00 - 2.49	.	.	.	.	.	13	.	.	.	.	.	.	13	
2.50 - 2.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
3.00 - 3.49	.	.	.	.	.	.	13	.	.	.	.	.	13	
3.50 - 3.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.00 - 4.49	.	.	.	.	.	.	.	.	.	.	.	.	0	
4.50 - 4.99	.	.	.	.	.	.	.	.	.	.	.	.	0	
5.00 - GREATER	.	.	.	.	.	.	.	.	.	.	.	.	0	
TOTAL	26	324	796	1848	1714	593	485	890	1363	714	957	283		

(Sheet 4 of 4)

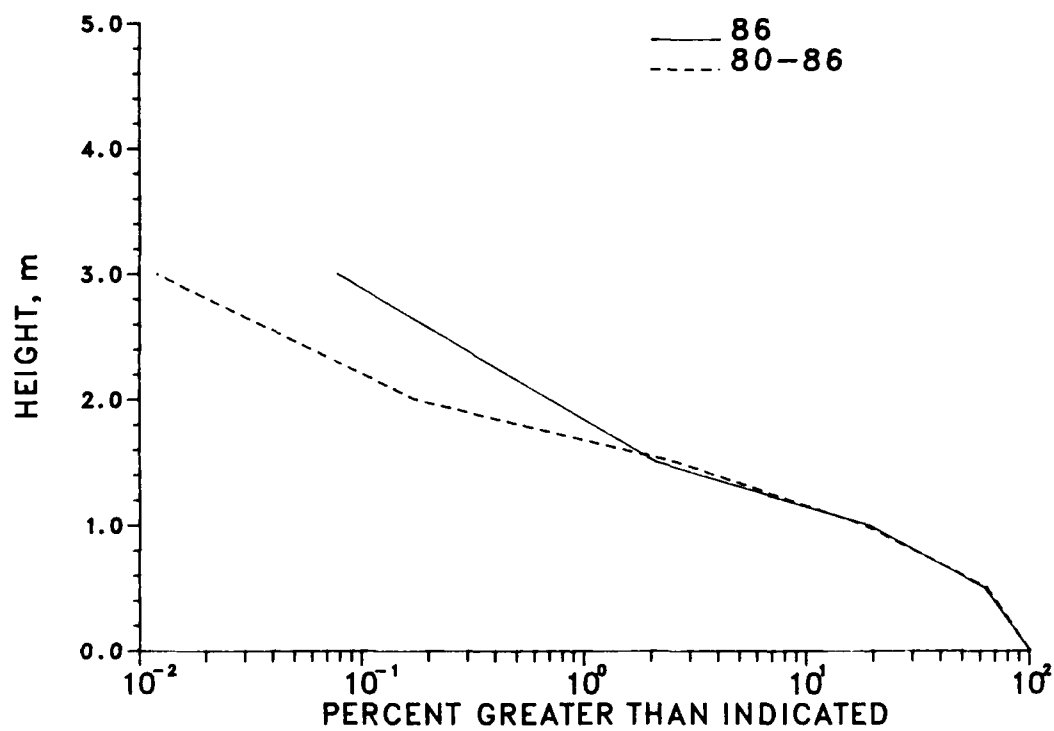


Figure B24. Annual cumulative distribution  
of  $H_{mo}$  for Gage 645

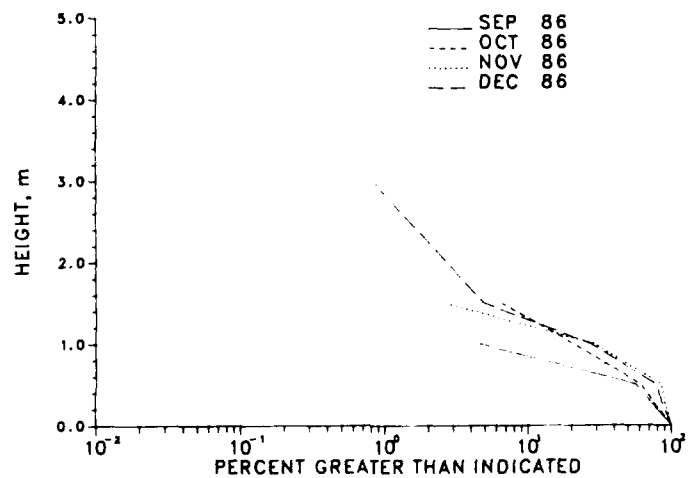
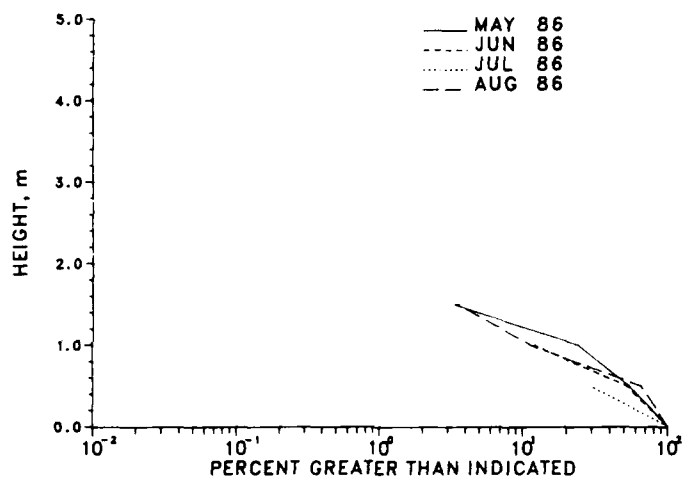
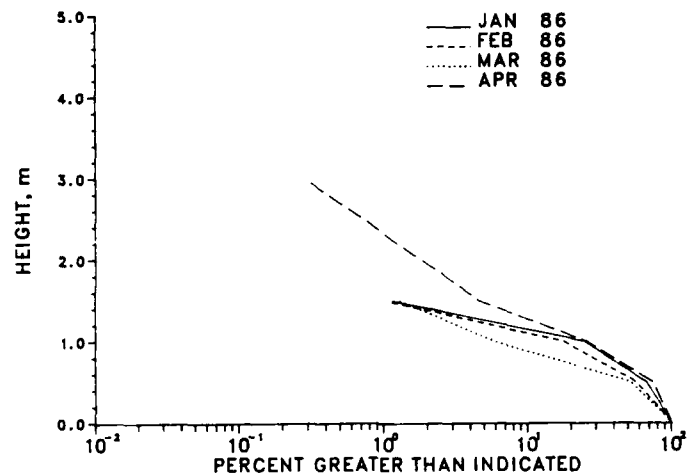


Figure B25. 1986 monthly cumulative distribution of  $H_{mo}$  for Gage 645

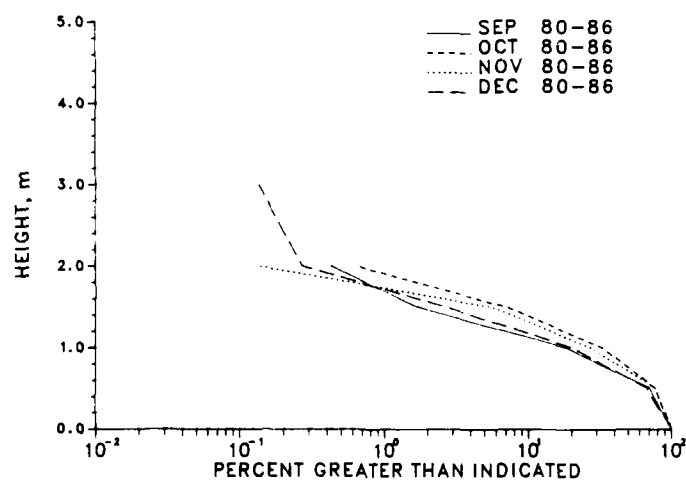
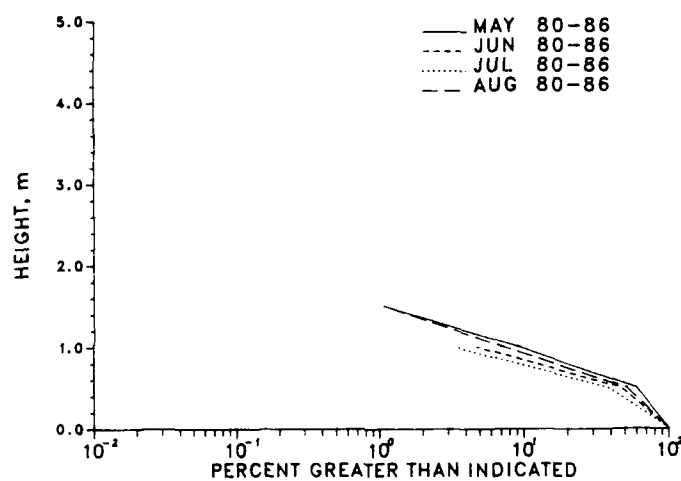
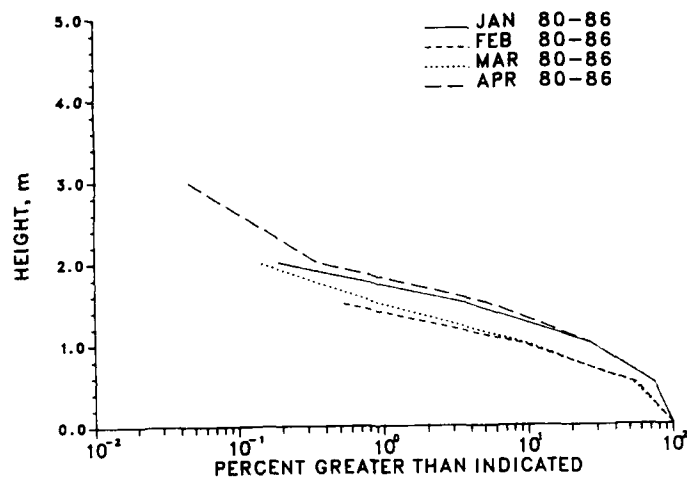


Figure B26. 1980 through 1986 monthly cumulative distribution of  $H_{mo}$  for Gage 645

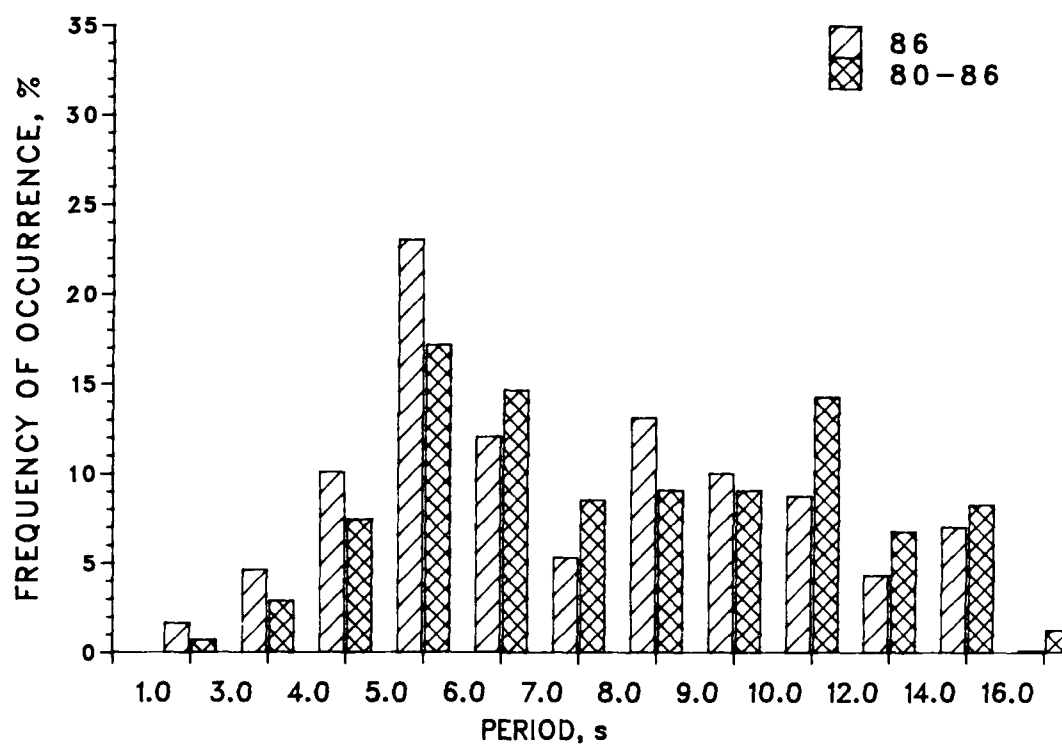


Figure B27. Annual distribution of  $T_p$  for Gage 645

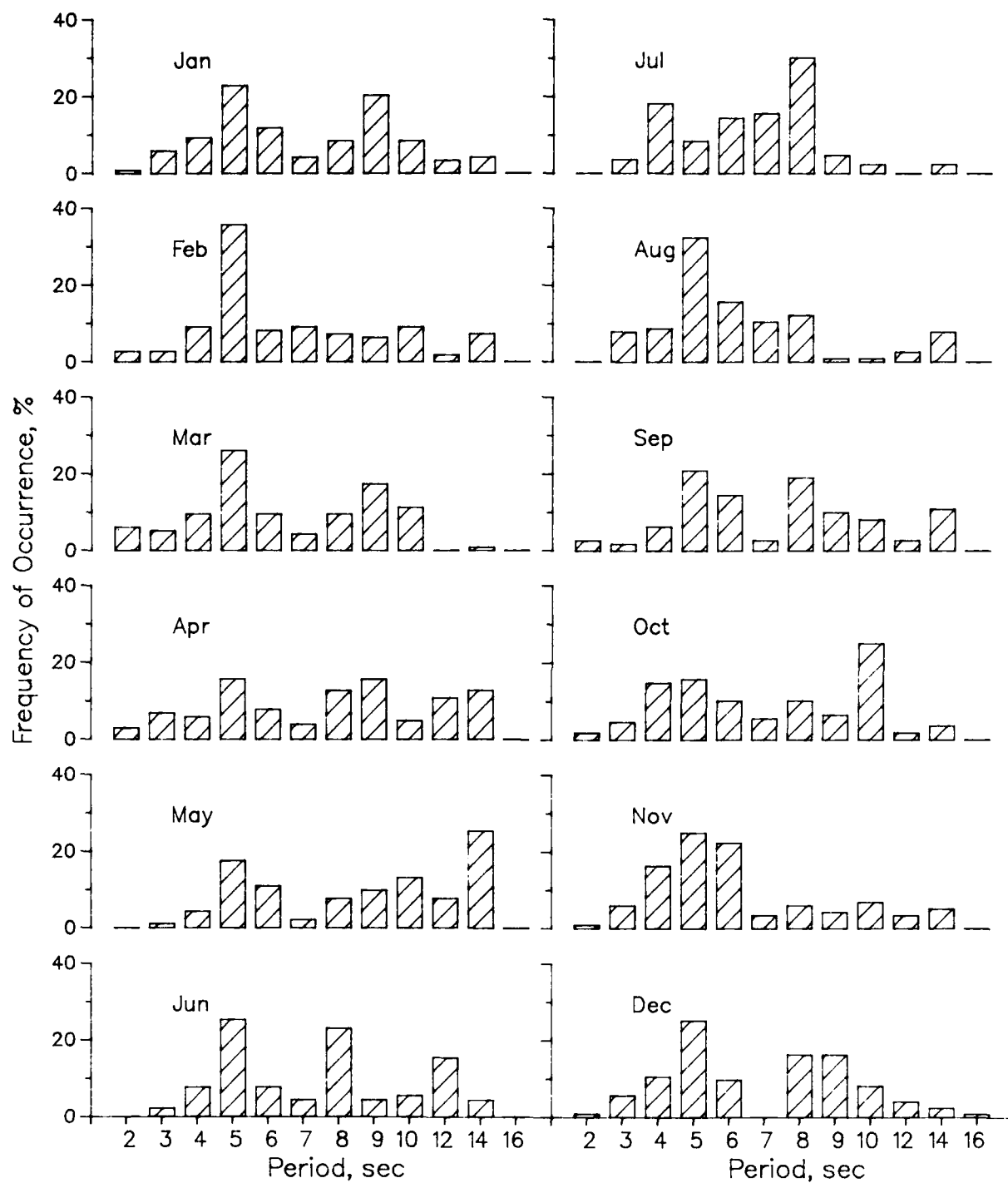


Figure B28. 1986 monthly wave period distributions for Gage 645



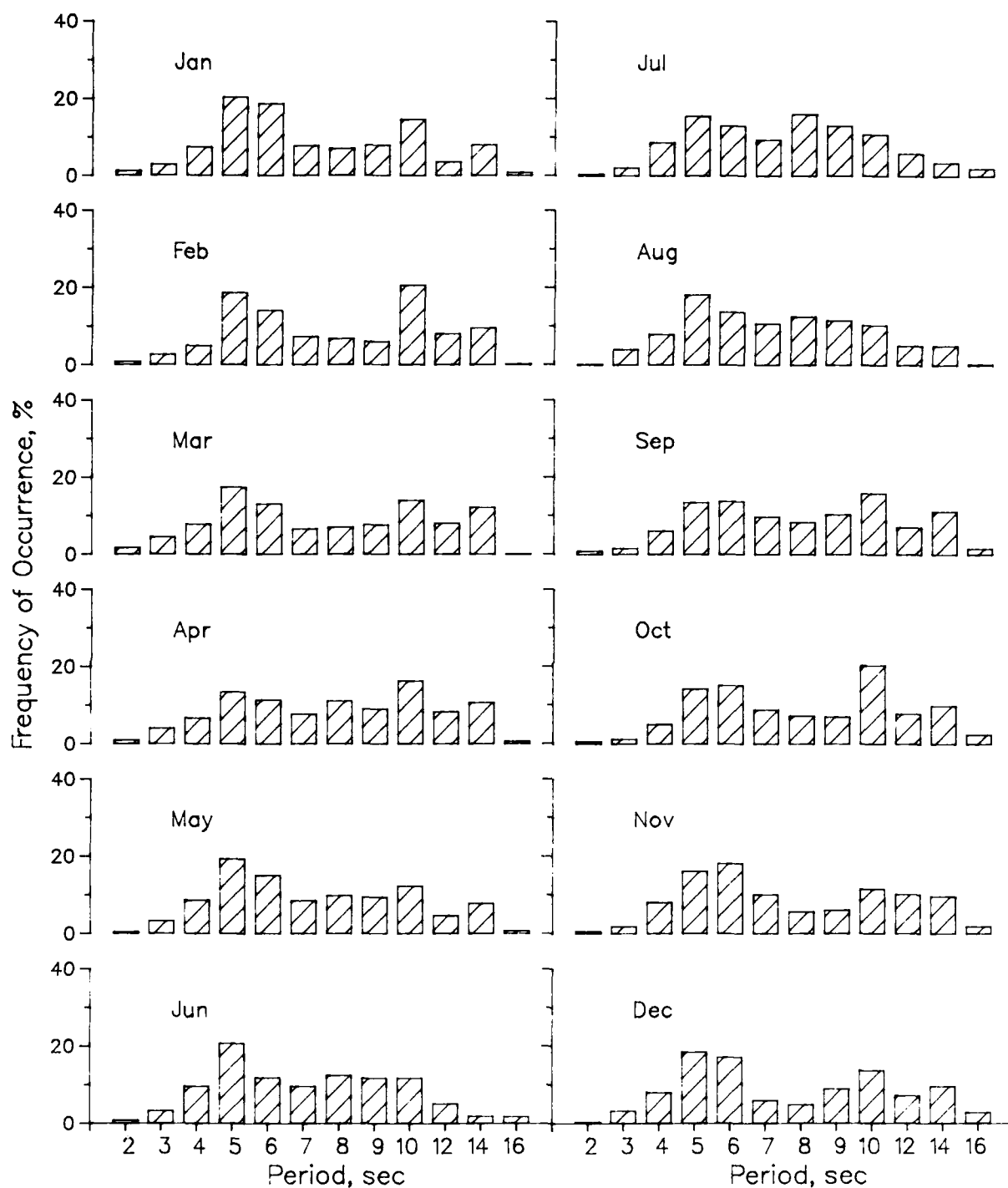


Figure B29. 1980-86 monthly wave period distributions for Gage 645

Table B24  
1986 Persistence of  $H_{mo}$  for Gage 645

Height m	Consecutive Day(s) or Longer																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19+
0.5	40	35	30	26	23	20	17	14	12	10	11	9	8	14	6	5	4	18	19+
1.0	57	21	14	10	2	1													3
1.5	15	4	2																
2.0	1																		
2.5	1																		
3.0	1																		

Table B25  
1980 Through 1986 Persistence of  $H_{mo}$  for Gage 645

Height m	Consecutive Day(s) or Longer																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19+
0.5	40	33	29	21	20	16	7	13	9	9	11	12	13	6	14	15	16	17	18
1.0	42	24	15	9		3													
1.5	12	5	2																